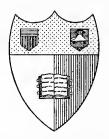
Princitive
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# PRIMITIVE SUN DIALS OR SCRATCH DIALS



MEDIÆVAL SCRATCH DIAL on statue of B. Virgin and Child, Inglesham Church, Glos.

# PRIMITIVE SUN DIALS

OR

# SCRATCH DIALS

Containing a list of those in Somerset

BY

#### DOM ETHELBERT HORNE

WITH A PREFACE BY

DR. J. CHARLES COX, F.S.A.

#### Caunton

BARNICOTT & PEARCE, THE WESSEX PRESS 1917

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#### PREFACE

To these fascinating pages, my good friend the Rev. Father Horne has invited me to write a few preliminary words by way of preface. I felt honoured by the request, and although I am not vain enough to imagine that my name will add materially to the popularity of this book, I desire as an old antiquary and ecclesiologist to bear my testimony to the value, originality and thoroughness of Father Horne's comprehensive researches. Another reason why I am glad to be connected in any way with this work is on account of its close connection with the superlatively beautiful and infinitely varied county of Somerset, to which I am much attached. In this shire I received the major part of my education at Sourcesetshire College, Bath, under the venerated headmaster the Rev. Hay Sweet-Escott, the late Rector of Cleeve. I also spent the happiest days of my boyhood, youth and early manhood in my father's parish of Luccombe, whence even as a schoolboy, I loved to explore the delightful old churches of West Somerset.

The author of these pages has accomplished a wonderful feat of travel in his rambles in search of this single detail of church lore, in the leisure hours of a very busy life. For in this huge county of Somerset, where there are over a million acres and nearly 500 parishes, Father Horne has visited every single old church to take notes and photographs of these primitive or mediaeval dials, wherever extant.

My own attention was drawn to the absorbing subject of these early forms of church time keepers, whereby the priests of Saxon, Norman and later days were able to regulate the hours of Mass and of other offices, by the striking paper in Vol. V of the Yorkshire Archæological Journal by the Rev. Father Haigh. During the years that I was beneficed in the

North Riding, I visited every example that he adduced of these primitive dials. My knowledge was soon after increased by the supplementary paper on this subject in Vol. IX of the same Proceedings by my friend Canon Fowler. Then in 1896 I became greatly interested in what I am still inclined to believe to be the remarkable old Saxon example built up in the porch of the Northampton church of St. Sepulchre, and published details with illustrations. Since then I have followed up the question somewhat more closely in connection with examples in different counties, particularly in those of Norfolk, Cumberland and Westmorland. I have also on several occasions drawn attention to these dials at the usual summer meetings of the Royal Archæological Institute, beginning with that held in Salisbury in 1887.

All this catalogue of my own contributions to this branch of ecclesiology is not set forth with any touch of vainglory, but chiefly to emphasise the fact that, in this respect, I now sit at the feet of Father Horne. His conclusions, based on a much wider knowledge, have taught me a lesson of humility, for they, to some marked extent, upset my own theories and

those of wiser men than myself.

J. Charles Cox

Sydenham

November 1916

#### NOTE BY AUTHOR

It is a pleasant duty to acknowledge my indebtedness to a number of friends whose help has been generously given. In the first place my thanks are due to Mr. Antonio de Navarro, whose interest in my work and whose generosity have alike made this little book a possibility. To the Rev. Dr. J. Charles Cox, F.S.A., who kindly consented to write the Preface, and who has given me the valuable assistance of his wide antiquarian knowledge, I am deeply indebted, and I also express my gratitude for help and advice given by Mr. H. St. George Grav, the Curator of our County Museum. A large number of correspondents in Somerset have called my attention to dials in places that I might have overlooked, and to these as well I tender my thanks. Among them I must mention the Rev. F. W. Weaver, F.S.A., who, during the last twenty-five years, not only on this subject, but on many kindred matters, has been an unfailing source of information. To the Rev. Prebendary E. H. Bates Harbin, Mr. Gerald Grey of Bath, and the Rev. George W. Saunders, Vicar of Curry Rivel—the latter especially, who has taken photographs and measurements of a dial I was not able to reach—my sincere thanks are also due. I should like to mention Mr. E. E. Purnell, the rural postman at Queen Camel, who made a careful list of the Scratch dials in his neighbourhood-where they abound-and gave me considerable assistance with them. It is difficult to single out names from among a multitude of correspondents all over England, who have sent me photographs or sketches relating to this subject. I am under obligation to the Rev. Canon Wilson of Worcester for information concerning the dials on Stoulton Church, and to Mrs. Marcon, daughter of the late Sir Henry Dryden, Bart., for the loan of some of her father's papers on the dials in Northamptonshire. Mr. C. H. Goodman sent me a valuable collection of photographs of Sussex dials, and to the Rev. Dr. Feltoe of Ripple Rectory I am especially obliged for the trouble he took in obtaining information about those in Kent. Also I have to thank Mr. L. W. Lancaster Gaye for placing at my disposal a considerable newspaper correspondence dealing with this question. Finally, I must mention Mr. W. Dennis Moss, photographer, of Cirencester, for kindly giving permission to use the photograph which forms the frontispiece.

ETHELBERT HORNE

Downside Abbey
Stratton-on-the-Fosse, Bath
December 8th 1916

# PRIMITIVE SUN DIALS OR SCRATCH DIALS

Ι

#### INTRODUCTION

PON the walls of many of our old parish churches may be found a primitive form of sundial, consisting of a few lines, cut directly on the stone. These dials have interested and puzzled many enquirers, and no very definite conclusions as to their purpose appear to have been reached. While at first sight they certainly seem to be a simple form of sundial, yet as they do not record time by any known system, and also as they frequently have lines upon them which the sun can never reach, it has been contended that they cannot be sundials at all. And there are other difficulties. there, one of them may be found facing north or east, and sometimes they may be seen within the south porch, deep in the shade. These difficulties have led investigators to form theories as to the possible use to which these incised lines were put, and while some of them are ingenious, none are convincing. The enquirer, as a rule, has studied only a few examples, and he has not infrequently had the misfortune to find a dial of an exceptional pattern or in an abnormal position. From these he has generalised, and the results have not been satisfactory.

It is only when some hundreds of these incised lines have been photographed and the photographs laid side by side and critically examined that it is possible to compare dial with dial and see their similarities and differences. This comparative process is scarcely possible in any other way. The dials on a number of churches may be visited, but it is difficult to carry away and retain an accurate picture in the mind, so various are the designs. But when two or three dozen photographs are ranged before the eye at one time, they may be subjected to minute examination and certain deductions may be made. As batch after batch of pictures is treated in this manner, the final conclusions are probably about as accurate as the subject allows. This is the method which has been followed for studying the dials to be found on the churches of Somerset, and upon this method the conclusions here set out have been reached. There is, however, one objection which may be made to such procedure—namely, that all the examples are taken from but one county in England, and that perhaps a yet wider range would have given different results. While it is true that a critical study has been made of the dials upon Somerset churches alone, nevertheless large numbers of photographs from all parts of England and the dials themselves in many places widely separated have been examined. The result of this examination is to show that dials do not differ in design or purpose, as far as can be discovered, in any part of the country. It is quite impossible to tell from the photograph of any particular dial to what county it belongs, so much alike are they. Although at first it seemed as if those in the eastern counties were larger than those in the western, later examination showed that it was only because persons photographed large and prominent specimens, and passed over or failed to notice the smaller kinds.

Hence although such an exhaustive study of the dials in other counties has not been made, yet a sufficiently large number has been examined to warrant the general conclusions as being fairly correct.

Hitherto this form of dial does not seem to have had any particular name by which it may be distinguished from the ordinary or formal sundial. The name Scratch dial has been used for the purpose, as the vast majority are merely scratched upon the walls and can scarcely be said to be incised. Ordinary sundials are frequently incised, particularly in their XVII century forms, and hence this word is scarcely enough with which to distinguish. It is true that Scratch dial does not describe all the kinds here treated, as some are made by drilling holes into the wall, and not merely with scratches, but

this variety is not common and hence the name chosen is probably sufficiently descriptive.

A Scratch dial differs from a true sundial firstly by being cut directly on a stone in the church wall, while a sundial usually has a plate or face of its own. Secondly the style or gnomon is always inserted at a right angle, while in a properly constructed sundial it is fixed at an angle which varies according to the latitude of the place. Thirdly a Scratch dial never has figures at the ends of the lines to denote the hours, as a real sundial has. To this may be added that while a sundial gives all the twelve hours of the day, a Scratch dial has often only one or two lines, and these strictly speaking do not designate time.

A few dials have been found which are a kind of link between the two forms above described, and they date in all probability from the early years of the XVII century. These dials are cut directly on the wall, they have the figures of the twelve-day hours at the ends of the lines, and the gnomon was either inserted at an angle, or bent upwards to make some kind of correction for the latitude of the place. Such a dial may be seen on the south buttress of Montacute church. Somerset, with its quaint gnomon still in position, and another exists on the eastern side of the south porch of Yatton, in the same county, with the gnomon lost. Sometimes too, a part of the building will be made to serve as a gnomon, as when a buttress or a drip-stone casts a shadow on an adjoining wall, where lines are cut with figures at their ends, to denote the hours. None of these forms are Scratch dials, being merely rough or ingenious methods of making an ordinary sundial.

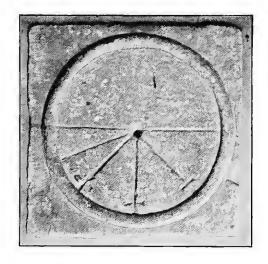
#### $\Pi$

#### VARIOUS THEORIES

One of the earliest writers on these primitive dials was the late Mr. W. Andrews, who contributed a paper in 1888 to the Warwickshire Field Club, on dials in the neighbourhood of Coventry. He says: "I have also found that church walls contain other markings especially incised circles, which often have rays diverging from the centre. The smallest which I have yet found is  $1\frac{3}{4}$  inches in diameter upon Nuneaton Church, and the largest 23 inches in diameter (half a circle only) upon the church of Hampton-in-Arden." The writer then gives lists of churches where these incised circles may be found, and points out that a circle with a hole in the centre and rays in the lower half only "is a common pattern. These are usually 6 to 8 inches in diameter, and at first sight look like miniature sundials. But the rays are equi-distant, or nearly so, and consequently do not correspond to the hour lines upon a dial. Also no figures are engraved." The writer sums up his investigations as follows: "It will be asked 'Who made these circles, why were they made, and when were they made?' To these questions I can at present give no answer. Further investigation is desirable. All the circles contain a small central hole and, as I have already explained, many of them possess rays . . . My belief is that some of these rayed circles have been left unfinished. Nuneaton Church there is a central spot with only three rays, and another with only one ray. The worn and decayed state of most of these circles shows that they are ancient. Most of them appear upon the south side of the churches. I know of one instance (Bath) where I have found circles upon the north side. This seems to indicate that although they are not sundials they may possibly in some way symbolize the sun."

In 1889, the second edition of Mrs. Alfred Gatty's Book of Sun-dials was published, and in an appendix to this interesting

#### SAXON SUNDIALS



Daglingworth Church, Glos.



Saintsbury Church, Glos.



collection of formal sundials is a chapter dealing with those of the incised description. The author having described the Saxon dials to be found chiefly in our northern counties, gives several extracts from a paper by the Rev. J. T. Fowler in Volume IX of the Yorkshire Archæological Society's Journal (pp. 34, 35). The writer has catalogued a number of Saxon sundials and Scratch dials on the churches of Yorkshire and adjoining counties, some of which Mrs. Gatty illustrates. Through failing to notice that all the lines now to be found upon any given dial were not necessarily on it originally, she arrives at the curious conclusion that many of these dials were at one time in a horizontal position (p. 414). "At South Cerney also, a church of very early date, three dials are built into the south buttress of the tower, . . . two of them are divided into day and night hours, and would therefore seem once to have been horizontal "(p. 419). The author appears to find a difficulty in this theory, for speaking of a dial on the church at Potterspury she says: "It may afterwards have been marked to show twenty-four hours and placed horizontally, and then put in an upright position when used in the building of the church. And yet there is no especial look of antiquity about this dial stone, which is not more weather-worn than the mouldings of the window beside it " (p. 415). Mrs. Gatty concludes by saying: "This slight sketch of early dials may serve to show how large a field still remains for the explorer . . . Some explanation, too, of various crosses which mark some of the lines is much to be desired. It is certainly possible in some cases that the crossed lines mark the canonical hours, as well as the central points of the four tides of the day."

In the latest edition (1900) of the Book of Sun-dials, a great deal that was said in the earlier editions about the kind of dials here dealt with has been omitted, and although Scratch dials are not distinguished from Saxon sundials, they are more or less kept together in a chapter (IV) by themselves. The authors seem to have given up the theory that many of these dials were once in a horizontal position, and were afterwards built upright into the church wall, and leave these "rayed circles" (p. 81) unexplained for the present, as "what

researches have been made are necessarily partial in character . . ." (p. 80). It is to be regretted that where such great pains have been taken to produce this exhaustive work on the sundial, the authors frequently have been obliged to take their information second-hand, or what is even more misleading, from drawings instead of from photographs. The quality of a line can rarely be shown in a sketch, however carefully it is made, and the artist is usually more anxious to reproduce the exact design as it stands, than to distinguish additional from original lines. It is this lack of critical examination of individual dials that somewhat diminishes the value of the excellent work done by the joint authors of the book in question.

There is a contribution to the Yorkshire Archæological Society's Journal of earlier date than the work quoted above. In Volume V the Rev. D. H. Haigh writes a long and learned article on Yorkshire Dials, where much of the account is taken up with a dissertation on runes and on Norse and Saxon words. The writer confines himself strictly to dials of the Saxon period, and he has gone at some length into the history of several of the more celebrated Yorkshire specimens. He refers to and explains the crosses on certain of the lines upon these ancient dials, mentioned by Mrs. Gatty, although perhaps the explanation is not quite convincing. Father Haigh does not refer in any way to the dials that are here dealt with, but his paper is useful as showing that they cannot belong to the Saxon period, as will be seen later.

An early writer on Scratch dials was the late Sir Henry E. L. Dryden, Bart. His careful drawings, accompanied by valuable descriptive notes of the antiquities of the county of Northampton, form an important item in the Northampton museum. Among his collection may be found a number of drawings of Scratch dials, together with their measurements. In December, 1896, he read a paper before the Northampton and Oakham Architectural Society on Squints and Dials, and of the latter he gives the following description: "The sort of dials to be described must not be confused with

<sup>&</sup>lt;sup>1</sup> Printed in the Worcestershire Society's Transactions, xxxiii, pt. 2, p. 354.

ordinary Sundials, either upright or horizontal. They are, with rare exceptions, upright upon the walls and formed by incisions in common building stones, often on quoins and buttresses. Their use and the reason for their formation have not been determined. They are usually circles or parts of circles from 3 inches to 10 inches in diameter, formed by grooves about 1/8 inch wide and the same deep, placed from 4 feet to 7 feet from the ground. They have a central hole of  $\frac{1}{2}$  an inch or  $\frac{3}{4}$  inch in diameter and from  $\frac{3}{4}$  inch to 1 inch in depth, and lines or rows of small holes radiating from the centre, and in some instances small dots or cavities in the periphery of the circle. Some have rays or dots only in the lower half of the circle. There are many varieties. The number of rays differs much, and they are usually more or less irregular. Rays in the upper part of the circle were useless for dial purposes. None contain figures." The writer then describes the work that others have done with regard to these dials, and continues his paper with a record of his own observations in the county of Northampton. He concludes that few of the central holes ever had gnomons in them. as they are too shallow and cup-shaped, and that if they had they would have indicated time so erroneously as to be useless. He notes that they are found all over the kingdom, and that many could not have been cut without ladders, and adds, "It is possible that some may have been a sort of 'time-table' to indicate the service hours." Sir Henry Dryden leaves the matter thus, and he is among the first who has suggested that these dials may not have been time-keepers, but merely massmarkers.

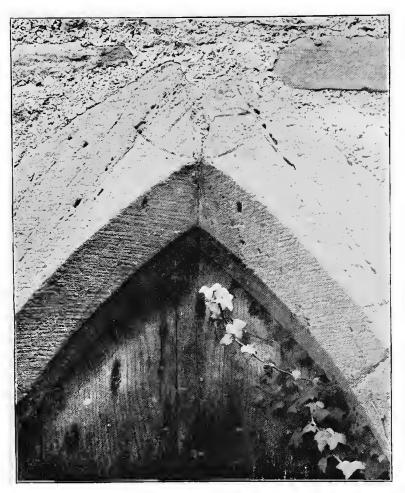
A lengthy correspondence took place in the Eastern Daily Press during the summer of 1910 on the origin and purpose of these incised marks. It began by a correspondent asking whether dials in wheel form might not be some form of the Sexton's Wheel,—a mediæval device said to have been used to determine by lot on which day to begin a private fast. As these Sacristan's Wheels¹ (whatever may have been their true purpose) were articles kept in a church it is difficult to

<sup>&</sup>lt;sup>1</sup> See Norfolk Archæology, vol. ix, p. 201.

see how they can be mixed up with these dials, which are scratches on the church wall. Another correspondent, the Rev. L. Meadows-White, Vicar of Horning, Norfolk, writes that he has examined sixty-nine churches in Norfolk and Suffolk, and he comes to the conclusion that these markings are not sundials, for three reasons: "(1) They are sometimes placed under the shadow of the south aisle on a buttress of the chancel, where they would be useless as sundials for half the day. (2) The spokes are drawn above as well as below the horizontals and the sun never casts a shadow upwards. (3) They are placed as an average breast high, and there is no reason why a sundial should be so low down." Several other writers in this controversy describe dials as existing inside porches, and point out that as the sun could never shine on them, this situation appears to them conclusive against the theory of their being true sundials.

Writing from Swanton Abbot, the Rev. E. E. Montford, the Rector, suggests that "the so-called sundial" marks on churches were primitive protractors cut by the old stonemasons, by which to set their sliding bevels, or to form guages for the angles at which to cut the stones." He adds that the only proof that he can offer of this theory is that "the angles at which most of the stones are cut are multiples of 15 degrees, or one of the 24 parts into which the circular marks are divided. Anyway, the workmen might have found them useful for their purpose, which is more than the sun or the sexton could have done."

The correspondence closes with an interesting letter from Mr. E. C. Middleton, F.R.P.S., in which he describes the various ways of dividing time and explains the methods displayed by the Yorkshire Saxon dials of division into eight tides, each of three hours of our present notation . . . "The division of the day into tides was common to North Europe and remained in Scandinavia as late as 1909. The Octaval was gradually merged into the Duodecimal system common to South Europe, and your Eastern Counties examples all seem to be of this latter period." Speaking of the great variation in the number of radii in these circles he says: "Again, we get a special marking occasionally, often these marked a celebration within the



Bridge Sollers Church, Hereford

church . . . ." The writer concludes by saying: "Hence with all these various number of radii, explanation of one set may be contradicted by another, and a full understanding has not been arrived at yet, and possibly never will."

Some twenty correspondents took part in this discussion in the Eastern Daily Press, many of them being clergymen who were in charge of churches that possessed these dials upon their walls,—the Rector of Tacolneston counting as many as five on his. The letters seemed to show that the general opinion was against these marks being sundials, and perhaps in favour of their being masons' marks.

The outcome of this correspondence was an illustrated article in *Knowledge* for April, 1912, by Messrs. Leo Gaye and Arthur Galpin on "Saxon Sundials, Masons' Marks and Consecration Crosses." As far as the article concerns Scratch dials it is not quite conclusive. The authors are inclined to call all dials of this description "Saxon," which term, they say, "refers to the notation, not necessarily to the workmanship." Yet, as will be seen later, these dials are neither Saxon in their construction nor is it their object to tell the time.

In an Appendix to the Churches of Norfolk by the Rev. J. C. Cox, LL.D. (1st ed. 1910) the author treats at length of the dials on the churches he has been describing. Having mentioned the "Sexton's Wheel" and "Protractor" theories and shown clearly that they have nothing to do with the question, he says: "In my opinion the sundial theory holds the field, and will be the more fully established the more these markings are generally studied . . . I have had the advantage of discussing some of these dials on the spot with various ecclesiastical experts, such as the late Mr. Micklethwaite and Mr. St. John Hope, and have no recollection of any doubt being expressed as to their use." Dr. Cox visited some of the Northampton churches with Sir Henry Dryden, and he adds, "and to the best of my belief he eventually expressed his opinion that the great majority of such markings were intended to be sundials." Having given a list of twenty-seven Norfolk churches which had between them forty dials or "markings" (and this list was subsequently enlarged) Dr. Cox concludes by saying that two churches among them had "a fragment of iron in the central hole. In at least a dozen instances I have noted similar fragments and many more cases of oxidised stains. Also in three or four places the insertion of a knife has brought to light fragments of hard oak. My own notion is that the conscientious parish priest, in his anxiety to be regular in his Masses and in the observances of the Hours, was in the habit of constructing these rough dials to supply him with a fair indication of the passage of time, and that in the cases where there are several examples they were repeated for greater accuracy as the older ones became worn."

To the above may be added Notes on the Dials or Circles on the South Door Jambs of Stoulton Church, near Worcester, communicated to the Worcestershire Archæological Society by the Rev. Canon Wilson, D.D. The writer gives a full description of four dials to be found on the above church with careful measurements and adds: "The problems of the origin and purpose of these circular markings is not yet solved." The author concludes by saying that he has additional reason for recording these descriptions as "the church, and especially the chancel, is in need of some considerable restoration. Whenever this takes place, it is hoped that some member of this Society will interest himself in bringing these stones to the knowledge of the restoring authorities, and take steps for their preservation."

In the Devon and Cornwall Notes and Queries for April, 1913, is an account of a dial at Bampton church, contributed by H. Mitchell Whitley. This dial, which is dated 1586, is probably not a true Scratch dial, but one of the transitional kind mentioned above.

Scattered notices of dials may be found in the Guardian, Church Times, the Sanctuary, the Strand magazine and other papers, but as they generally deal with individual dials, and not with their origin and purpose, it is not thought necessary to refer to them here. Finally, in the Proceedings of the Somerset Archæological Society for 1914 is a paper by the writer on Somerset Scratch Dials which is incorporated in the following chapters.

#### $\Pi\Pi$

#### TYPES OF SCRATCH DIALS

THE forms taken by Scratch dials are various, and they range from a few simple radiating lines to complex figures made with many circles. Those with but one or two lines are always more uncommon than those with many, and dials with circles are usually of later construction than those without. Some dials have neither lines nor circles, but are made by drilling holes into the wall, the holes probably being intended to hold pegs. It is not easy to reduce all these varieties to a few types, but the list below gives headings under one or other of which any dial can be described.

The position of the stylehole is taken as the most characteristic feature, and forms the first method of distinction. The position (but not the number) of the lines is the second, and the presence of a circle, or any part of one, forms the third. These three marks or characteristics are sufficient to account for the great majority of Scratch dials, the types that follow them being necessary only because one here and there will be found that will not fit in under the above common distinctions.

The Hole dials too, naturally form a type by themselves, as do those dials which are made when lines and holes are combined. The plain circles, with or without a central stylehole so commonly found on our church walls, are not regarded as a type, as they may not be dials (unless they were originally painted), but they are placed at the end of the list of types, as it was felt that some mention should be made of them.

Type 1. The stylehole made in a joint between two courses of masonry, with lateral and perpendicular joints serving as lines, additional incised lines being added. Plate IV.

Dials answering to the above description are probably the oldest in point of date. Nearly every dial inside a porch that has been discovered hitherto is of this type, or the following.

Type 2. The stylehole made in a joint between two courses of masonry, with all the lines incised and no joints used. Plate V.

This type is also quite primitive, but does not represent the minimum of labour shown in the above.

Type 3. The stylehole made in a stone, with lines radiating from it downwards only. Plate VI.

This is the commonest and most typical form of Scratch dial.

Type 4. The stylehole made in a stone, with lines radiating from it in all directions. Plate VII.

This is the form which produces the "wheel dial," and is the result of deliberate mutilation of the original simpler form.

- TYPE 5. The stylehole made in a stone, with the radiating lines enclosed in (a) a portion of a circle, (b) a semicircle, (c) a complete circle. Plates VIII, IX and X.
- Type 6. The stylehole made in a stone, with two or three very short wedge-shaped lines beneath it, having their points towards the style. Plate XI.

These curiously shaped dials are rare, and of a very distinct type. They are usually quite small.

Type 7. The stylehole made in a stone, with a perpendicular and a horizontal line cutting across it. In one or more of the four right angles thus formed, one or more radiating lines. Plate XII.

This is also quite a distinct type, and it is not particularly common. As it is closely allied to a Saxon sundial in its construction, it cannot in all cases be put down as merely a Scratch dial.

Type 8. The same arrangement as Type 7, but the whole contained in a circle. Plate XIII.

A dial of this form may quite easily be a Saxon sundial, particularly if all the workmanship is thoroughly good.



Kilmersdon Church, Somerset

Type 9. The stylehole made in a stone, and at a short distance from it holes forming an arc or semi-circle. Plate XIV.

These are more properly "Hole dials" than Scratch dials, and are not nearly as common as the latter kind. The holes probably held pegs.

Type 10. The stylehole made in a stone, and surrounded by a complete circle of holes. Plate XV.

This form is a mutilation of Type 9, and is rather uncommon.

Type 11. The stylehole made in a stone, with lines radiating, on which holes are drilled. Plate XVI.

This is a combination of the Hole and Scratch dial. It is not infrequently found with a hole at the end of, or on, the mass line.

To the above may be added:

No. 12. A stylehole in a stone, surrounded by a complete incised circle, no hour-lines or holes being visible.

Circles of this kind are not infrequently met with on church walls. Where the stylehole is deep and carefully made, such circles may have been Scratch dials. They were probably painted within, or had marks painted on their circumference. It has been noted that the area contained within these circles is sometimes clean and fresh looking. The lichens that grow freely on the wall do not grow within them. This suggests that the pores of the stone may be blocked with paint or some such substance.

### IV

#### THEIR POSITION

It might seem needless to remark that a dial which depends upon the sun for its utility must be placed facing south, and vet while the vast majority are in this position, many can be found that face in other directions. It is noticeable that in choosing a site for a dial the maker seems, as a rule, to have taken a very practical view of the matter. It is placed nearly always where it would be met with at once by a person approaching the church. The most favourite spot is on one of the sides of the south doorway, and the right hand is chosen in preference to the left in a proportion of more than four to one. But besides the south porch, any part of the wall may be used for the purpose, if it has the requisite handiness for a person who is walking to the church door. As a rule, a footpath leads one directly from the churchyard gate to the south porch. When this is the case, the dial will be, as stated above, by the side of the entrance. But should the footpath have to pass a part of the church before it reaches the doorway, in all probability the dial will be found somewhere on the route. When for instance, the gate leading from the road is at the east end of the churchyard, the first part of the church one comes to, in walking towards the south porch, is the southeast corner of the chancel, and if the church possesses a dial, it will usually be found here. Where the reverse arrangement exists and the entrance to the churchvard is at the west of the building, if there is a tower at this end the dial will be found on its south-west corner, or on the same corner of the nave, should the tower be central. Sometimes a church is so situated that the entrance porch is on the north side, and the south wall is at the back, so to speak. When this is the case, the dial will be found on the first buttress round the corner, either at the east or west end of the building,—whichever is the nearer to the entrance porch. Now and then a dial is in a position that seems quite off any beaten track. It may be round at the back of the church, as described above, but so far round and out of the way that it cannot be reached conveniently from any point of approach. Yet perhaps a break in the churchyard wall clearly shows that ages ago there was an entrance there, but a road has been diverted, and the old way is no longer used. Sometimes too there are faint traces of a blocked up doorway near a dial, which will account for its position. Through all these variations it is certainly curious to see how practical the dial maker usually seems to have been.

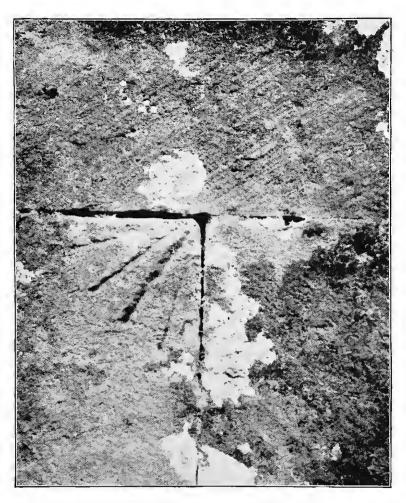
Noting the position of a dial will sometimes help us to fix the order in which different parts of a church were built. If a transept or chantry chapel projects in such a way that it cuts off the light from the dial at the hours for which it is marked, we may rightly conclude that this part of the church is more recent than that containing the dial.

Many early Scratch dials may be found at the sides of the inner door of the south porch, and their position proves that the porch over them is a later addition to the church. It is curious that persons who have found these incised stones so situated, have come to the conclusion that it is a clear proof that they are not sundials of any kind, as the sun could never reach them in such a position. When a Norman doorway is covered by a porch of the Perpendicular period, it is clear that this inner door must have been for some centuries the outer door of the building, and it was during those centuries that the Scratch dial was in use.

In churches in our eastern counties, some variations from the above positions of the dial may be noticed. If a church is built wholly of flints, the dial maker seems to have found a difficulty in getting a stone that was suitable for engraving, and he has consequently made his dial where he could, and this was not always in the most convenient position for the seeker. Hence the quality of stone of which the church is built will also be a determining factor with regard to the dial's position.

But the dial stones are not always to be found on the south side of the church. The "restorer" who has destroyed so much that was interesting in our ancient buildings has not spared these mass-markers, and we may find them used as repairing stones, or rebuilt-often upside down-in out-ofthe-way places. They have been found in the north buttress of a tower and in the foundations of a south porch. Cases occur of their being seen on the east end of a church, and again under a west window, and even within the building itself. Nearly all these transpositions have taken place in comparatively recent times, but here and there a dial may be found out of place that has evidently been in its present position a century or two. The total number of transposed dials is very small compared with the whole, and probably does not exceed two in every hundred of all those at present existing. The number of reversed dials is about the same. The rebuilder, while anxious to keep the old stones in their old positions, not infrequently reverses them, and we find the Scratch dial still facing south, and probably in its original position, but upside down. Many examples of this treatment can be found throughout the country.

While it is generally easy to see why a dial was put in the position in which it is found, yet when a church possesses a number of undoubtedly genuine dials it is often difficult to find a reason for this duplication. Some walls have upon them as many as four or five or even six Scratch dials, all in different positions, and all seemingly in working order. Not uncommonly a dial may be found by the side of the priest's door into the chancel, as well as one at the south porch. is obvious that both these had their uses, and we must suppose that both were made to register alike. But besides these, we may often see one or two others that are not so easy of explanation. It was pointed out above that a dial might have been rendered useless through an addition to the church which cut the light away from it. Hence another dial in a new position would be needed. Then again it is not improbable that a dial was sometimes thrown out of work by the churchyard yew tree which, as it grew, cut off the sun. The change of approach to the church might be another



Portbury Church, Somerset
Type 1

reason why a new dial was made in a more convenient place, and even the change of the hour for the church services might render such a thing necessary, for the incised lines could not easily be obliterated or altered. There may also have been dials for winter and summer time to compensate for the inaccuracy caused by instruments constructed as were these. Yet when we have considered all these reasons, there must still remain uncertainty as to why, in some cases, so many dials were needed. That many of these duplications are merely "copy dials," as will be explained later, is certain, but some of these duplicates are too carefully made to be so accounted for, and their existence must remain somewhat of a mystery.

The average height of these dials above the ground is about 5 feet 2 inches. This was within easy reach for the carver to do his work without the aid of a ladder or like help. It is uncommon to find one, in its original position, as much as seven feet above ground level, and they are rarely as low as three. Some may be found at only slightly above two feet, but we must generally suspect such specimens as having been rebuilt in the wall in some remote past.

In size Scratch dials do not vary much, although perhaps there is a tendency for them to be larger in the eastern and northern, than in the western counties. The average length of the noonline is a little over four inches. Some dials run to seven or eight, and a noonline of ten inches may sometimes be found. The smallest specimens are about two and a half inches in length, but dials as small as this are rare. The dial shown in Plate XI is of this size.

### V

### THE STYLE. OR GNOMON

THE gnomon or style that cast the shadow was a peg that stood out at right angles from the face of the inscribed stone. As far as is known, no Scratch dial has preserved the whole of its style until the present time. In a few instances the shank may still be seen in situ, firmly fixed with cement, the rest of the peg being broken off level with the face of the dial. The diameter of one or two of these shanks that have survived is about half an inch, and the length that they projected from the wall would be a question of the length of the lines by which they were surrounded. If the dial was quite small, a much shorter style would be necessary than if it was of some size. With regard to material, the shanks remaining appear to be made of a fairly hard white metal. This is probably latten, an amalgam of zinc and copper, much used for dowels and various purposes in the Middle Ages. Iron was rarely emploved, although it has been found in one or two instances. The few shanks that remain at the present time are often so firmly embedded that they could not be removed without the destruction of the stone in which they are fixed. But the majority of the styleholes are clean and empty, without any trace of cement, and of such a depth that they could have held a wooden peg securely. That these gnomons or styles were often made of wood has been proved by extracting chips from the styleholes, and in one instance about an inch and a half of the original oak gnomon was brought to light. is a common idea that unless the style slopes at an angle that has a certain relation to the latitude of the place, the dial will not register correct time. For the purpose of these ecclesiastical dials, a non-sloping gnomon would answer quite as well as one more accurately arranged, and it would certainly be easier for unskilled hands to fix. It is true that there would be a difference between summer and winter time as told by such a dial, but the variation of twenty minutes or so would be of little consequence in ages when men did not live by the hand of the clock in the manner in which they do to-day. It would probably be even an advantage on account of the light, if the church services were nearly half an hour later in midwinter than they were in June. In some of the later dials, it is not uncommon to find the hours of 2 and 3 p.m. clearly This may have been also with a view to the difference of seasons. While it might be an advantage to have mass half an hour later in winter than in summer, the same could not be said of an afternoon service, which would be better earlier than later. Hence the two lines above referred to may perhaps have been made to compensate for the varying daylight.

The accuracy with which the style was inserted in the wall must have exercised a considerable influence on the dial. Supposing the wall to have faced due south,—and it is comparatively few churches that are quite correctly orientated, if the style was inserted at exactly a right angle with the face of the stone the time shown by the shadow would be correct at certain periods of the year. But if the hole were drilled into the stone with an inclination to either side, the shadow must have fallen very inaccurately. Hence it seems that the dial maker first fixed the style in the wall, and then cut lines to agree with it. This theory is borne out in numberless cases where the noonline, i.e. the perpendicular line immediately below the stylehole, is cut a little either to one side or the other. This may have been caused by the inaccuracy of the church wall, but the variation can also be found in cases where the wall faces south with tolerable correctness, and the deviation from the perpendicular can only be accounted for by the stylehole having been bored crookedly into the stone. Hence we may take it as certain that in the great majority of cases, the Scratch dial maker first fixed the shadow peg in the wall, and then cut the lines, as it would have been well nigh impossible to make all the due allowances unless this method was followed

In only one case has a duplication of the stylehole been noticed. At Kingstone Church, in Somerset, the dial has two styleholes side by side. Unfortunately the stone is so weathered that it is difficult to make out the lines, but it may be (supposing the extra hole is not simply the work of some copyist) that by shifting the shadow peg the dial was made to record differently at different periods of the year. Here and there styleholes may be found sloping upwards into the stone, instead of entering it at a right angle. Dials with sloping gnomons are not, strictly speaking, Scratch dials, as has been noted above in the Introduction.

One of the questions connected with this subject has a certain human interest. Who were the makers of these little dials? The manufacture of formal sundials was a profession, and required a certain knowledge of mathematics and perhaps too of astronomy, but such learning was hardly necessary for the making of these simple mass-markers. It seems quite improbable that the Scratch dial was the handiwork of the professional craftsman who, quite early in the Middle Ages, was travelling from place to place and working in carved wood and stone, vestments and stained glass. It is not uncommon to find like designs repeated from village to village, as the "ecclesiastical firm," using its modern name, went its rounds. Much church art in this way became professionalised, and individualistic effort tended to die out.

There is nothing about the Scratch dial to suggest that it was the work of a professional. While preserving a general likeness, they differ widely from one another, and no set design can be traced in them. Their extreme simplicity of construction also shows that no professional aid was sought or needed, and hence we may conjecture that in all probability they were local work, and they may have been made by the sexton or even by the parish priest himself. It is clear that the majority of these dials were cut by persons who were not much accustomed to use tools. It is not rare to find that, when a somewhat hard stone has to be used, advantage is taken of a joint in a course above in which to insert the style. This avoids the difficulty of drilling a hole. Also for the same reason, vertical joints between the courses are



South Brewham Church, Somerset  $Type \ {\scriptstyle 2}$ 

not infrequently used to save the labour of cutting hour lines. This must have been because the dial maker was unable to cope with a difficulty that could have been overcome easily by a professional stone worker. The dial shown in Plate IV is a good example. The hardness of the stone is attested by the tool-marks of the mason who dressed it remaining sharp and clear until to-day, and hence it was not an easy one to engrave. The stylchole has been made at the junction of three stones, and advantage has been taken of other joints, so that they might serve as hour lines. Subterfuges of this kind are frequently found, and they would seem to betray the work of an amateur.

## VI

#### LINES AND HOLES

In endeavouring to read the hours marked on a Scratch dial, it should be carefully borne in mind, what was explained at some length in the Introduction, that such a dial was not made for telling time but for marking a church service, and hence no very exact "time," with one exception, can be told This exception is the perpendicular line immediately under the stylehole which marks 12 noon. If the church wall faces due south, and if the style was inserted in it at a right angle, the above line will always be noon, for the midday sun being at its highest point the shadow from the style must be directly beneath it,—the two above mentioned conditions being fulfilled. On the left side, as you face the dial, is a line at exactly a right angle to the noonline, denoting 6 a.m. the right side, the line at right angles to the noonline is 6 p.m. Nearly half-way between the 6 a.m. and the noonline is one that marks about 9 a.m. This is the mass line, which is constant in nearly every dial, and is alone the line for which the dial was usually constructed. Dials can be found in which this and the noonline are the only lines, and careful inspection of a dial that has several others upon its face usually reveals a marked difference between the mass line and all the rest.

Tierce, or the Third Hour, was said at 9 a.m., and was immediately followed in great churches and religious houses by the principal mass. In parish churches also, mass on Sundays and Holidays was usually at this hour in pre-Reformation England, and every unmutilated Scratch dial is a witness to the fact. If the lines on the dial shown in Plate VI be examined carefully, it will be noticed that the mass line is of different quality from the others. It was made at a different time and with a different tool, and probably by a different hand.

A photograph, however clear, does not show the minute detail that can be seen when the lines in the stone are examined with a magnifying glass. A V cut made with a mallet and chisel, and carefully sloped down from the two sides, and lines that are scraped or scratched into the stone with a sharp pointed instrument, are not difficult to tell apart after a little experience. In the former case the line is clear and clean and straight throughout its length, while in the latter the pointed instrument ran round the minute hard particles in the stone, and left them standing in the irregular furrow, while the edges of the line are rough and jagged.

Nearly all the difficulties raised by the various writers referred to in Section II with regard to these primitive dials not being sundials of any kind at all, are caused by the failure to notice that many Scratch dials are so mutilated that most of the lines on them are spurious. The same rules of interpretation must be applied to these incised stones that have to be applied to any other ancient document. What was the original—how much is interpolation—which parts are by a later hand, and so on, are all questions that must be considered before any particular dial can be read correctly. Examine the specimen shown in Plate X, and it is apparent that the lines on the right-hand side, as one looks at it, are of different quality from those on the left. The latter are the originals—or some of them—and most of those on the right have been added by a later hand. One of the commonest difficulties raised is that a large number of Scratch dials are in the form of a complete wheel, and that as the sun can never shine upwards these patterns must be "protractors," or "masons' marks" or "emblems of the sun," and various other quaint suggestions. In Plate VII a "wheel dial" is given, and if it be examined it can be seen, even in the photograph, that the added lines above the horizontal line, as well as several of the others, break and waver and are most irregular. The fact is that someone with a little time to spare, and a knife in his hand, found what he considered an unfinished design, and set to work to complete it. He has added numberless spokes to the wheel, and worse than this. he has gone over the old genuine lines and cut them deeper, and has made it very difficult for us to tell, at this length of time, what belonged to the original and what are the additions.

Besides the dials that have radiating lines, there are quite a large number that are made with holes drilled into the wall, to mark the various times. One of these is shown in Plate XIV. These hole dials are constructed on exactly the same principle as those made with lines, and they may consist of only one or two holes to mark the services, or there may be a ring of them completely surrounding the central stylehole. These ring dials are again mutilations, just as are the wheel dials. Plate XV is an example of this mutilation. Two or three holes in an arc appeared to require finishing, so the arc was made into a circle. If the depth of these be tested, the original holes are frequently found to be much deeper than those added for the sake of uniformity. It is probable that these hole dials were intended to take pegs that could be moved from one hole to another for denoting services at different times in the year.

Before dismissing the subject of the mutilation of dials there is another kindred matter that must not be lost sight of, namely what may be called "copy" dials. Beneath a genuine dial, and sometimes by the side of it, may be seen another almost exactly like it. One such "copy" may be seen to the left of the dial, Plate VIII. These copies require careful study. They may be dials that have been constructed for use during a different part of the year from that for which the other dial was used. This may be known by there being a distinct variation in the lines—notably in the position of the mass line. On the other hand, such a dial may be merely a rough copy—generally badly and clumsily made—of the dial near by. As a rule a copy is immediately below or to one side, but rarely above the true dial, as the latter position is most inconvenient for copying. Seeing a pattern on the church wall which he did not understand, the rustic carver first mutilated it, and if there was a soft and tempting stone below it, he then proceeded to make a copy. The pocketknife was the instrument usually handiest, and it is not difficult to detect a copy Scratch dial that has been made with its help. The lines are more or less like the original, but



Stratton-on-the-Fosse Church, Somerset
Type 3

generally crooked and broken, and if a circle comes into the design it has not been easy to make it with the point of a knife. The copyist will sometimes give up the first and start a second, or even a third, and he may try to make a stylehole, or be contented with a mere dent in the stone,—much will depend on the material he has to work on. Of course, like all counterfeits, they are sometimes difficult to detect, and now and then there will be cases where it is quite impossible to say whether a given dial is a genuine specimen or not, but taken on the whole "copy" dials are usually so badly made that they are easy of discovery. But these pseudo circles must not be confounded with true dials, that are often multiplied in an extraordinary way upon church walls, as has been stated above, where, as it was pointed out, four or five may sometimes be found on the same church.

## VII

### THEIR AGE

Most of the writers who have described these primitive dials seem to have assumed that they date from Saxon times; in other words, that there is no difference between a Saxon sundial and what is here called a Scratch dial. It will be necessary to show in some detail that the two are quite distinct,—not only in point of age, but in design, and in the purpose for which each was made.

There is no comparison between such a dial as the well-known Saxon example at Kirkdale in Yorkshire, and that shown in Plate VI, which is a fair average specimen of a Scratch dial. The inscription on the former tells us that it is a clock, and the whole of the day hours, divided into tides according to the then prevailing system, are shown upon its face. There are several other Saxon dials of this type in Yorkshire and elsewhere, which are obviously intended for telling the time

church in Gloucestershire; another, almost exactly like it, may be found at Saintsbury in the same county (Plate I); and a

third in Somerset, at Lullington church. It will be observed that all of them divide the twelve day hours into four tides, exactly as does the great dial at Kirkdale. All the Saxon dials that have been examined, however small and insignificant, never vary in their design, as far as essentials go, and that they were intended to act as clocks that would tell the time at all the day hours is obvious to anyone who will compare them. It is the losing sight of this fact, or the not clearly understanding it, that causes the confusion between the genuine Saxon sundial and the later Scratch dial. Scratch dial is in reality a section of a formal sundial adapted to a special purpose, and hence it is not a time-teller but a mass-marker. The proof of this statement lies in the fact that numbers can be found with only one, or perhaps two hour lines, cut upon their face. What possible use could such a dial be as that shown in Plate III for knowing the time of day? Or if Plate VIII be examined, it will be clear that only the hours 9, 12, 2 and 3 p.m. are marked. Such dials would be worthless as parish clocks, and they cannot be compared with even the simplest and plainest of those of the Saxon age, with their complete record of all the day hours. Hence a proof that Scratch dials are essentially different from Saxon sundials lies in the fact that the former were clocks, dividing the day into four tides, whereas the latter have no tide divisions, and frequently mark but one or two of the early morning hours.

It should be borne in mind by those who favour the theory that Scratch dials are of Saxon origin, that to be so they must have gone through some vicissitudes. From their original position in a Saxon church they must have been transferred to a Norman one. When after a certain lapse of years this building needed restoration, they would have been removed again and built into churches of the Perpendicular style. Now it is well-nigh incredible that stones with these poor little scratched dials should have been saved up in this way, and carried over from one building to another through so many centuries. It frequently happens that the dials in question are cut in a manner that involves three, and sometimes four stones in their construction, and it certainly adds to the difficulty

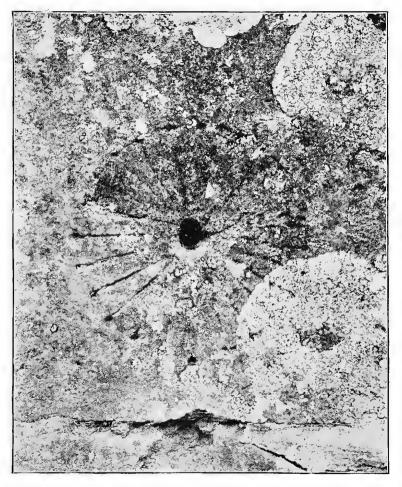
to suppose that all these stones were carefully treasured up and built together again in each successive church.

But it is sometimes possible to find a dial so situated as to betray its date fairly accurately.

Over the priest's door at Bridge Sollers church, Herefordshire, is a Scratch dial of but four lines. The door is in the Early Pointed style, and the dial is constructed so as to need for the noonline the joint between the two stones that form the apex of the arch. This dial and doorway are shown in Plate II, and it is clear that the lines were cut at some time after the doorway was made, for the shape of the stones makes it impossible that they could have existed in an earlier building, and have been worked up into their present position. Many other examples could be given where Scratch dials are found upon stones which cannot possibly have been in buildings earlier than the XIV century, and some not earlier than a century later.

Again, we may go back to an earlier style, and see a Scratch dial let into decorated Norman work, as we do at Stoven church in Suffolk or at Aller church in Somerset. It may not be as old as the stone on which it is cut, but at least it cannot be any older. To imagine that the Norman carver, out of reverence for a dial made by the Saxons (for whom he never appears to have had much respect), selected this dial stone out of which to make a decorated capital for his doorway seems carrying devotion to a theory beyond what is reasonable.

That incised stones were often handed down from one building to another is undoubtedly true, but it should be borne in mind that altogether fresh stones would be employed in making an addition to an existing building. Thus when we see, as we do so often, the addition of a Perpendicular porch to a church of an earlier style, we may reasonably conclude that most, if not all, the stones used in it were new. Yet at the entrance to these Perpendicular porches, Scratch dials exist quite commonly. The stones on which they are incised do not differ from those used in the rest of the construction, and hence it is fair to assume that the dial is of the same date as the porch upon which it is cut. It is not



East Pennard Church, Somerset
Type 4

uncommon to find a Scratch dial by the side of the inner door, as has been said, and it certainly looks as if the builders of the later porch, seeing that they had rendered it useless, made a new one at the outer entrance to take its place. Plate V shows a dial of quite primitive form, by the side of the inner door within the porch of S. Brewham church, and Plate IX shows the one on the outside of the porch, made to take the place of the former.

It now remains to make some suggestions as to the probable date when these Scratch dials were constructed.

For a rough guide, we may not be far wrong in saying that the Scratch dial was first used after the Saxon sundial had gone out of vogue and before the clock came into common use. There were two causes that brought about the destruction of Saxon dials. The first was the change of style in church building that followed from the Norman Conquest. The small Saxon buildings must have been largely superseded all over the country by churches of the newer type, and with the change or restoration the majority of old dials would have been destroyed, as they were cut immediately on the stone. And secondly the system of dividing the day into four "tides" of three hours each was out of date, and a new method of reckoning time was being adopted. Hence the Saxon dials were of use no longer. Again, if a church possessed a clock, it would scarcely resort to so simple and crude a method of regulating its services as that provided by a Scratch dial. We know fairly well at about what date church clocks first appeared. The Benedictine monks at Westminster had a clock in 1288, and their Canterbury brethren, not wishing to be behind them, had one in 1292. The St. Alban's community followed with another in 1326, and the great clock at Glastonbury, portions of which are still in going order, prove that time-keeping with an instrument was fairly common by the beginning of the XIV century. Many more of our parish churches than is generally supposed had set up clocks from quite an early date. This can be gathered from churchwardens' accounts, where outlay for repairs to clocks, ropes and weights can be found recorded.

If therefore we place the reign of the Scratch dial between

the period denoted by the extinction of the Saxon sundial, and the introduction of clocks, we shall probably not be far wrong. The duration of such a period will probably vary considerably in different places, for undoubtedly a Saxon dial was saved here and there, as their present existence proves, and certain parishes may have been too poor to provide themselves with the luxury of a clock; but taken as a general rule, the period above indicated will give, with tolerable accuracy, the age of the Scratch dial.

### $_{ m VIII}$

#### THEIR USE

Although many of the details connected with this subject must necessarily be conjecture, for lapse of time alone has made certainty impossible, yet the main purpose for which these Scratch dials were constructed stands revealed with great clearness when a sufficient number of them are ex-Their primitive object undoubtedly was to mark the hour for mass. In the majority of dials the mass line differs from all the rest, in some way or other, and it is often the only line. If Plate VI be examined it will be noticed that the highest line but one on the left is sharper, straighter, and more distinct than any of the others. Plate IV this same line is shown deeper and wider than the rest, and even in roughly made and badly mutilated dials, such as that shown in Plate VII, a straight edge to one or two of the lines shows that they were once made with a care not expended on the others. If a dial, as in Plates III and XIII, contains but one line, it is in this position, namely at 9 a.m. or thereabouts. The testimony of the hole dials The hole corresponding to the aforesaid line is is the same. often deeper than its neighbours, as if to hold a peg, and it may be duplicated (see Plate XIV), there being one hole in front of the other. Sometimes too there is a combination. a dial will have a hole made on, or at the end of, this 9 a.m. line. Another method of marking this favoured line is by putting a cross on it, or by producing it to a length considerably beyond the others.

In discussing which hours of the day the lines on a Scratch dial represent, it has been shown that while noon will always be the line that is perpendicular (supposing the style to have been inserted in the wall fairly straight), the other lines may vary a good deal according to the way the wall is built, facing due south or failing to. Hence unless these two factors are known—the angle of the style, and the orientation of the church—the lines on a dial cannot be interpreted with accuracy. But they can be read sufficiently to show that a line corresponding with the position of the figure VIII on a clock face, will be 9 a.m. In most churches in pre-Reformation days this was the usual hour for mass on Sundays and Holidays.<sup>1</sup>

But besides this 9 a.m. line, many dials contain several others. The perpendicular or noonline is present in some form or other in every dial that has been examined, and it is difficult to find any good reason why it is so constant. It has been suggested that it marked the time for the midday Angelus bell, but this almost certainly could not have been its use. The midday Angelus is quite a late development, and large numbers of these dials must have been cut some centuries before this devotion became general. It is therefore improbable that the noonline marked the 12 o'clock Ave bell on any but a very few of the latest dials.

One of the earliest accounts of the Angelus that we have is from the Statutes of Wells Cathedral, A.D. 1331, which direct that "three strokes should be struck at three several times upon the great bell in quick succession," and this shortly before curfew. This evening Ave was said throughout Europe as early as the first half of the XIV century, and it would usually be rung after sunset. This fact seems conclusive against the later hours, often found on Scratch dials, being used to time the evening Angelus, as the sun would not have been shining when it was rung.

Many dials have a 6 a.m. line cut very distinctly, and it may be that in some parts of the year this line acted as a guide for ringing the early morning Angelus, but it is merely theory, and there are no facts that can guide us in the matter. The morning Ave was introduced next after the evening one, and it was said throughout at least one of the centuries that

<sup>&</sup>lt;sup>1</sup> For times for mass, cf. Rock, Church of our Fathers, Lond., 1853, p. 146; Archwologia, vol. xlv, page 61: Chr. Wordsworth, Mediaval Services in England, Lond., 1898, p. 63.

the Scratch dial was in use. We find Archbishop Arundel ordering it to be rung in England in the year 1399.

Other lines which are fairly constant on dials are those that fall about 2 or 3 p.m. Here we are on surer ground than when speculating about the *Angelus*. The usual time for vespers would have been in the early hours of the afternoon,—the exact time being probably earlier in winter than in the summer.

In spite, therefore, of the ill-treatment so many of these primitive dials have suffered at the hands of the idle boy with a knife, in spite of the church restorer who has tried so frequently either to fill the lines with cement or obliterate them with a scraper, in spite too of some centuries of wind and storm, enough evidence exists to show conclusively that the original object of the Scratch dial was to mark the hour for mass. And if it had a further use, it was probably to tell the hour for vespers as well, but that with regard to denoting the time for any of the three Angelus bells, the likelihood that such was its office is extremely slight.

<sup>&</sup>lt;sup>1</sup> Chr. Wordsworth, Mediæval Services in England, London, 1898, p. 60.

## $\mathbf{IX}$

#### CONCLUSION

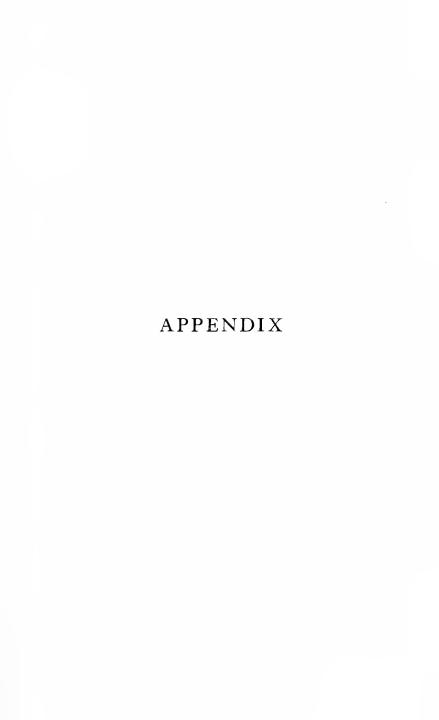
In conclusion it may be asked whether this subject is worth the time and trouble expended on it, for the dials are uninteresting as works of art and insignificant in themselves. While quite admitting that they are not of first-class importance, yet, as they have never been studied and collected before, what has been done will prevent them disappearing from history altogether. Some thousands must have been destroyed already throughout the country, both by time and church restorers, and probably about half of those now existing will have vanished before another fifty years have passed.

And there is a certain human interest attaching to them as well. Village life in the Middle Ages revolved round the parish church to a very great extent, and its feasts and services fixed the date and set the time for things temporal as well as spiritual. In most country places the church services were undoubtedly regulated by these Scratch dials, and so from this point of view they played a not unimportant part in their day. They are few and feeble now, for the winds and storms of five or six centuries have nearly worn them out, but the remnant seemed worth saving for the sake of the story that they tell.

# Plate VIII



Lamyat Church, Somerset
Type 5a



# PART I

# NORTH SOMERSET

Containing the dials upon the churches in the districts of

AXBRIDGE. Bath.

KEYNSHAM. Long Ashton.

CLUTTON.

SHEPTON MALLET.

FROME.

Wells.

## AXBRIDGE DISTRICT

This district contains 36 parish churches, and of these, 11 churches have 18 dials between them, 8 of which are doubtful. The churches with dials are:

$\operatorname{Biddisham}$		1*		Puxton	1	
East Brent		1		Uphill (old church).	2	
Cheddar.		1		Weare	1*	
Congresbury		1	2*	Wick St. Lawrence.	2 1	*
Hutton		1	1*	Wrington	1*	
Lympsham		1*		J		

<sup>(\*)</sup> denotes doubtful dials.

The churches at Brent Knoll and Mark cannot be thoroughly examined on account of creepers.

# BIDDISHAM CHURCH

1. On the w. pier of the s. porch is what seems to be a stylehole, but there is no trace of circle or hour-lines. The hole is in a very likely position for a dial. Several other probable places are covered with ivy.

September 7th, 1911.

## EAST BRENT CHURCH

2. This dial is on the s. side of the church, on the first buttress from the E. end. It is 4 feet  $3\frac{1}{2}$  inches from the ground, the length of the noonline is 6 inches and the stylehole is 1 inch in depth. The aspect is s. by  $10^{\circ}$  E. Type 3.

September 5th, 1911.

The containing circle is faint and irregular.

## CHEDDAR CHURCH

3. This dial is on a buttress on the w. side of the priest's door. It is 6 feet 4 inches from the ground, the noonline is  $4\frac{3}{4}$  inches in length, and the stylehole is more than 2 inches in depth by  $\frac{3}{4}$  of an inch in diameter. The aspect is s. by  $10^{\circ}$  E. Type 5c. August 29th, 1911.

The chantry by the side of this dial projects so far that it must cut off all the light after the early morning hours.

# Congresbury Church

4. (1) This dial is situated on the E. side of the entrance to the s. porch. It is about 4 feet 4 inches from the ground, the noonline is  $5\frac{1}{2}$  inches in length, and the stylehole is filled up. The aspect is s. by  $3^{\circ}$  w. Type 3.

5. (2) About 12 inches below the above is a circle  $3\frac{3}{4}$  inches in diameter. The stylehole is filled up and no hour-lines or

holes are marked. See No. 12.

6. (3) To the right of No. 1 is a stylehole and a doubtful circle. See No. 12. September Sth, 1911.

# HUTTON CHURCH

7. This dial is on the E. side of the priest's door. It is 2 feet 11 inches from the ground, about  $4\frac{1}{2}$  inches in diameter, and the stylehole is small and very shallow. The aspect is s. by 10° E. Type 5b. May 14th, 1913.

The stone on which this dial is cut forms part of the moulding round the doorway, and at a somewhat recent "restoration" it has been re-set upside down. A great part of this moulding appears to have been transferred from one side to the other during the rebuilding, and this accounts for the dial stone being reversed.

8. A second imperfect dial is on the w. side of the doorway. The lines are about  $2\frac{1}{2}$  inches in length. It is much

cut about and mutilated.

#### Lympsham Church

9. On the first buttress to the E. of the s. porch is a circle without stylehole or lines. September 5th, 1911.

#### Puxton Church

10. This dial is on the N. buttress of the tower, which is at the w. end of the church. It is 3 feet 8 inches from the ground, the circle is 9 inches in diameter, and the stylehole is open and shallow. The aspect is N.W. See No. 12.

September 8th, 1911.

The stone on which this dial is cut has been brought from some other part of the church, and used to repair the buttress. It appears to be very ancient and is much worn.

# UPHILL CHURCH (Old)

- 11. (1) The dial is above the Norman window in the tower of this ruined church.
  - 12. (2) This dial is above the s. doorway.

# WEARE CHURCH

13. (1) This dial is on the s. side of the buttress which is at the w. corner of the tower. It is 6 feet 8 inches above the ground, the noonhole is distant from the style 6 inches, and the stylehole is filled up. The aspect is s. by 20° E. Type 9.

September 7th, 1911.

This dial is composed of 13 holes arranged in a semi-circle.

14. (2) On the w. side of the priest's door is a doubtful dial. It is 3 feet 3 inches above the ground, the circle is  $4\frac{1}{2}$  inches in diameter, and the stylehole  $\frac{1}{4}$  of an inch in diameter. This dial, if it be one, has neither lines nor holes.

#### WICK ST. LAWRENCE

15. (1) This dial is on the first buttress from the w. end of the s. aisle. It is 5 feet 9 inches above the ground, the noonline  $2\frac{1}{4}$  inches in length, and the stylehole open and very shallow. The aspect is s. by  $20^{\circ}$  E. Type 5c.

September 11th, 1911.

- 16. (2) This dial is on the s. side of a buttress at the w. end of the church. It is 4 feet above the ground, the noon-line is  $3\frac{1}{4}$  inches in length, and the stylehole is filled up with hard mortar. Aspect as above. Type 4.
- 17. (3) On a buttress to the E. of the priest's door is a doubtful dial, in the second course upwards from the plinth. The circle is  $5\frac{1}{2}$  inches in diameter and the stylehole is filled. This dial has no hour-lines visible. Aspect as above.

#### Wrington Church

18. This doubtful dial is cut on the buttress to the E. of the s. porch. It is 6 feet 5 inches from the ground, 7 inches in diameter, the stylehole is  $1\frac{3}{8}$  of an inch in depth and  $\frac{1}{2}$  an inch in diameter. The aspect is due s. See No. 12.

September 5th, 1911.

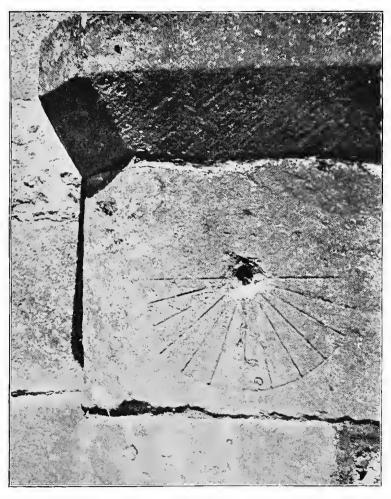
This is a perfectly plain circle and has neither hour-lines nor holes. There are however, three doubtful little marks cutting the circle at 3, 4 and 5 p.m. This circle may be compared with that at High Ham Church.

# BATH DISTRICT

This district contains 22 parish churches, and of these, 7 churches have 8 dials between them, 3 of which are doubtful. The churches with dials are:

Claverton	1	Langridge		1
Dunkerton	1*	Swainswick		1
Englishcombe	1*	Wellow .	•	1
Hinton Charterhouse	1 1*			

The churches at Holloway (Bath) and Charlcombe cannot be thoroughly examined on account of creepers, notice-boards, etc.



South Brewham Church, Somerset  ${\bf Type}~5b$ 



#### CLAVERTON CHURCH

19. This dial, when first seen on July 23rd, 1913, was on a quoin, upside down in the foundations of the s. porch, on its eastern side. In 1914 it was removed to the face of the s. porch, on the E. side of the doorway. When in its original position it was 16 inches above the ground, it is now about 7 feet. The noonline is 4 inches in length, the stylehole  $3\frac{1}{8}$  inches in depth by  $\frac{7}{8}$  of an inch in diameter, its original aspect was due E. and is now s. Type 5c. July 23rd, 1913.

The discovery of this dial led to its being removed from its ignominious position, and to its being placed where it probably was originally, before some fairly late "restoration" of

the porch had consigned it to the foundations.

#### DUNKERTON CHURCH

20. On the s.w. buttress of the tower, on the E. side of it, at a height of about 10 or 12 feet from the ground, is a stone used for repairing that appears to have a dial upon it. It is upside down, and the stylehole is open. There are about five lines ending in dents, about  $3\frac{1}{2}$  inches in size. It is out of reach, and is altogether a doubtful dial. April 17th, 1913.

# ENGLISHCOMBE CHURCH

21. On the w. buttress of the s. transept there is what seems to be a dial. It is 6 feet 6 inches above the ground, the noonline is about 3 inches in length, and the stylehole, which is small and shallow, is about  $\frac{1}{2}$  an inch in depth and  $\frac{3}{16}$  of an inch in diameter. The aspect is s. by  $10^{\circ}$  E.

June 3rd, 1913.

The dial is faint, the lines weak, and it is a somewhat doubtful one, as it is difficult to see how the central hole could have held a style. There is a good deal of ivy on the church which prevents a thorough examination of the walls being made.

# HINTON CHARTERHOUSE

22. (1) This unsatisfactory dial is on the E. side of the priest's door, at a height of 2 feet 9 inches from the ground.

The noonline is  $2\frac{3}{4}$  inches in length, the stylehole was in a joint and does not show, and the aspect is s. by 8° E. Type 2.

June 17th, 1913.

23. (2) Above this dial is what appears to be another. The noonline and an a.m. line show. It is impossible to see a stylehole, and hence the dial is a very doubtful one.

#### LANGRIDGE CHURCH

24. This dial is on a quoin stone at the E end of the s. aisle. It is 3 feet 9 inches from the ground, the noonline is about 5 inches in length, the stylehole, which is in a joint, is filled with hard cement, and the aspect is s. by  $18^{\circ}$  E. Type 5c.

June 11th, 1913.

The lines on the P.M. side of this dial are much fainter and not so well cut as those on the A.M. side, and look like a much later addition.

#### SWAINSWICK CHURCH

25. This dial is on a quoin stone at the E. end of the nave. It is 5 feet 6 inches above the ground, the noonline is  $2\frac{1}{2}$  inches in length, the stylehole is 1 inch deep and  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  E. Type 6.

June 11th, 1913.

The shank of the style is probably still embedded in the dial. At the churches at Tintinhull (224) and at Martock (201) are other dials of this curious pattern. They are the only three of this type in the county.

# WELLOW CHURCH

26. This dial is on the s.w. face of the angle buttress at the E. end of the s. aisle. It is 5 feet 6 inches above the ground, the noonline is about  $3\frac{3}{4}$  inches in length, the stylehole large and somewhat broken, and the aspect is s.w. by  $10^{\circ}$  w. Type 3.

August 25th, 1911.

On account of the dial being cut on a stone facing s.w. the lines vary considerably from the normal. Roman numerals have been cut at the ends of the lines by a later hand, but if they are correct they can only have been arrived at by replacing a style and observing the shadows, on account of the abnormality mentioned above.

## CLUTTON DISTRICT

This district contains 27 parish churches, and of these, 7 churches have 11 dials between them.

The churches with dials are:

Chew Magna	2	Radstock	ζ		1
Compton Martin .	2	Stowey			$^2$
Litton	2	Ubley			1
Nempnett Thrubwell	1	v			

The church at East Harptree is covered with creepers and cannot be examined.

#### CHEW MAGNA CHURCH

- 27. (1) On the first buttress E. of the s. porch several dials are cut. At a height of 5 feet 8 inches from the ground is one with noonline 6 inches in length, the stylehole  $2\frac{1}{2}$  inches deep by  $\frac{3}{8}$  of an inch in diameter, and the aspect s. by  $20^{\circ}$  E. Type 2.
- 28. (2) On the next stone to the w. and one course above is another dial, with the noonline  $4\frac{3}{4}$  inches in length and the stylehole filled and in a joint of the masonry. Type 1.
- (2) Below the above (No. 1) are two others, which are probably only "copy" dials, made for amusement.

January 3rd, 1912.

It is probable that dial No. 2 is the original and the oldest. The 9 a.m. line is made with great care, with a well-formed V cut.

# COMPTON MARTIN CHURCH

29. (1) This dial is on the E. side of the closed doorway on the s. side. It is 4 feet from the ground, the noonline is 2 inches in length, the stylehole is 1 inch deep by  $\frac{1}{2}$  inch diameter, and the aspect is s. by  $15^{\circ}$  E. Type 5c.

July 6th, 1916.

30. (2) This dial is on the first buttress from the E. end, on the s. side. It is 4 feet 10 inches from the ground, the noonline is 4 inches in length, the stylehole is filled in, and the aspect is s. by 12° E. Type 5c. August 12th, 1911.

### LITTON CHURCH

31. (1) This dial is on a buttress on the w. side of the s. porch. It is 7 feet from the ground, the noonline is  $2\frac{1}{2}$  inches in length, the stylehole is  $1\frac{1}{4}$  inches deep, and the aspect is s. by  $45^{\circ}$  E. Type 5c.

32. (2) This dial is on the E. side of the s. porch. It is 4 feet 6 inches above the ground, the noonline is 3 inches in length, the stylehole is  $1\frac{1}{2}$  inches in depth, and the aspect is s. Type 5c.

August 12th, 1911.

The first of the above dials may not be in its original position on an angle buttress, but may have been built in at a "restoration." It has certainly been considerably re-cut and added to. The second dial is on a friable stone and is much worn.

## NEMPNETT THRUBWELL CHURCH

33. This dial is on the E. side of the s. porch. It is 3 feet 8 inches above the ground, the noonline is about  $2\frac{1}{2}$  inches in length, the stylehole is 2 inches deep and 1 inch in diameter, and the aspect is s. by  $10^{\circ}$  E. Type 4. August 5th, 1913.

The stone on which this dial is cut is soft, and so badly worn by time that the lines are nearly invisible. Probably in a few years nothing will remain except the stylehole.

# RADSTOCK CHURCH

34. This dial is on the E. side of the s. porch. It is 5 feet above the ground, the noonline is 10 inches in length, the stylehole, which is in a joint, is filled, and the aspect is s. by 17° E. Type 1. May 23rd, 1913.

The lines of this dial are about 5 inches in length, with the exception of the noonline, which is as above stated. Probably this line has been added to for amusement, as there does not seem to be any reason for its abnormal length.

# STOWEY CHURCH

35. (1) This dial is on the window-sill splay nearest the w. end, on the s. side of the church. It is 5 feet from the ground, the diameter of the circle is 6 inches, the stylehole is

 $1\frac{1}{2}$  inches deep by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by  $10^{\circ}$  E. See No. 12. January 12th, 1912.

36. (2) This dial is on the s.E. corner of the chancel. It is 8 feet 8 inches above the ground, the noonline is 3 inches in length, the stylehole, which is in a joint, is filled, and the aspect is s. by 5° E. Type 2. July 6th, 1916.

Dial No. 1, if it be one, is merely a double ring, with  $\frac{3}{4}$  of an inch between the circles, on the slope of the window-sill. No lines or marks show, but it is possible it may once have been painted. The stylehole is very clean and deep.

# UBLEY CHURCH

37. This dial is on the w. side of a door on the s. side of the church. It is 5 feet 1 inch above the ground, the noon-line is  $4\frac{1}{2}$  inches in length, the stylehole is filled up, and the aspect is s. by 20° E. Type 3. August 12th, 1911. This simple and primitive dial appears to mark the hours

This simple and primitive dial appears to mark the hours 8, 9, 10, 11 a.m. and noon, and all the lines would seem to be original. The hardness of the stone, as witnessed to by the "tool-marks" remaining, has prevented the dial from being mutilated.

### FROME DISTRICT

This district contains 28 parish churches, and of these, 12 churches have 22 dials between them, 4 of which are doubtful.

The churches with dials are:

Beckington	1	1*	Norton St. Philip	1	
Buckland Dinham .	1		Road	1	1*
Great Elm	1		Tellisford .	3	
Farleigh Hungerford	1	1*	Wanstrow .	1	
Kilmersdon	1		Whatley .	1	
Lullington	1		Woolverton .	5	1*

# BECKINGTON CHURCH

38. (1) This dial is on the angle buttress on the E. of the s. porch. It is 7 feet 7 inches from the ground, the noonline is 5 inches in length, the stylehole  $\frac{3}{4}$  of an inch in depth and  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by  $40^{\circ}$  w. Type 3.

39. (2) On the E. side of the s. porch is a dial 3 feet 10 inches above the ground, the length of the noonline is  $2\frac{1}{2}$  inches, and the stylehole is so small and shallow that it is doubtful whether this is a dial at all. It contains only two lines.

July 18th, 1913.

The other lines on No. 1 are each 7 inches in length, and they seem to be cut to allow for the position of the dial on an angle buttress, as it faces nearly s.w.

#### BUCKLAND DINHAM CHURCH

40. This dial is on the E. side of the s. porch. It is 4 feet 2 inches above the ground, the noonline is  $4\frac{1}{2}$  inches in length, the stylehole is  $\frac{1}{3}$  of an inch deep, and the aspect is s. Type 2.

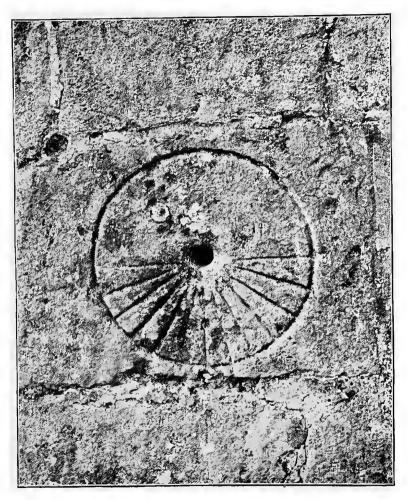
April 14th, 1913.

This dial is on soft stone and most indistinct. There appear to be dots at the ends of the lines. Besides this dial, which is a somewhat doubtful one, there are three others near it. One is 6 inches above, the next is 6 inches below, and the third is 24 inches below it again. All three of these dials are alike, and they consist of a few radiating lines which are very short. There is no stylehole, but the lines are in each case just below a joint, where it is possible one may have been. On the w. side of the porch there is another of these doubtful dials of exactly the same pattern. They are perhaps all merely copy dials.

# GREAT ELM CHURCH

41. This dial is between the tower at the w. end and the first window of the nave. It is 4 feet 6 inches above the ground, 7 inches in diameter, the stylehole is  $\frac{3}{4}$  of an inch deep, and the aspect is s. by  $10^{\circ}$  E. Type 4. July 18th, 1912.

This dial has been made into a wheel, but it appears to have been done with deliberation, as the added lines are as good in quality as the original. The adjoining parishes of Whatley and West Cranmore have had their dials treated in a like way, and it is possible the method was used as a means of obliterating a distasteful object. All three mutilations may be the work of the same hand, for the method is the same, viz. to match the original lines and dots with great care.



Baltonsborough Church, Somerset  ${\bf Type} \ \, {\bf 5}c$ 

#### FARLEIGH HUNGERFORD CHURCH

42. (1) This dial is on a quoin at the E. end of the nave. It is 3 feet 6 inches above the ground, the noonline is  $2\frac{1}{4}$  inches in length, the stylehole is  $\frac{7}{8}$  of an inch deep and rather small. The aspect is s. by  $22^{\circ}$  E. Type 4.

43. (2) On the E. side of the first chancel window from the w., at a height of 7 feet 3 inches, is a plain circle  $4\frac{3}{4}$  inches in diameter. It has a very shallow stylehole. There are no

marks or lines, and it is an extremely doubtful dial.

June 17th, 1913.

Dial No. 1 was completely covered with ivy when found, and is being seriously damaged by it.

## Kilmersdon Church

44. This dial is under the first window  $\mathbb{E}$ . of the tower. It is 6 feet 9 inches above the ground, the noonline is  $5\frac{1}{2}$  inches in length, the stylchole, which is in a joint, is  $2\frac{5}{8}$  inches in depth, and the aspect is due s. Type 2. Plate III.

December 5th, 1911.

This very primitive dial consists of two lines only, one at about 9 a.m. and the noonline. The lines are cut on a hard stone, but they are shallow, and unless the sun is at an angle, i.e. well past midday, they are difficult to see. The lines are carefully cut, and there can be no doubt as to the genuineness of this dial.

# LULLINGTON CHURCH

45. This dial is on a quoin at the s.w. corner of the s. transept. It is 8 feet 6 inches above the ground, the noonline is 5 inches in length, the stylehole (which is out of reach) is about 1 inch in diameter, and the aspect is s. by 5° E. Type, that of the smaller Saxon dials. Plate I. July 18th, 1913.

This interesting dial is probably a Saxon one, and is the only one of the kind in the county. The transept into which the stone has been built was made only a few years ago, and hence the dial is not in its original position.

## NORTON ST. PHILIP CHURCH

46. This dial is on the E. side of the s. porch. It is 6 feet 7 inches from the ground, the noonline is 3 inches in length, the stylehole is  $2\frac{1}{4}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by 15° E. Type 3. June 17th, 1913.

This is a particularly poor dial, and has copy dials cut on

each side of it.

#### ROAD CHURCH

47. (1) This dial is on the s.e. corner of the chancel, at a height of 5 feet 5 inches from the ground. The noonline is  $4\frac{1}{2}$  inches in length, the stylehole is 1 inch deep by  $\frac{5}{8}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  w.

48. (2) On the s.w. corner of the s. aisle is a doubtful dial. It consists of a stylehole only, without other marks, at a height of 4 feet 6 inches from the ground. April 16th, 1915.

Dial No. 1 is of poor construction, and No. 2 is on a stone which is so badly weatherworn that it is a very doubtful one.

# Tellisford Church

49. (1) This dial is on the w. side of the s. porch. It is 4 feet 8 inches above the ground, the noonline is 2 inches in length, the stylehole is  $\frac{3}{4}$  of an inch in depth, and the aspect is s. by 5° E. Type 3.

50. (2) This dial is on the w. side of the s. porch. It is 3 feet 8 inches above the ground, the noonline is  $4\frac{1}{2}$  inches in length, the stylehole is  $\frac{7}{8}$  of an inch in depth, and the aspect

is the same as No. 1. Type 4.

51. (3) This dial is on, the E. side of the s. porch. It is 5 feet 8 inches above the ground, the noonline is  $3\frac{1}{2}$  inches in length, the stylehole is filled up, and the aspect is the same as No. 1. Type 4.

June 17th, 1913.

Dial No. 1 is probably in its primitive state, and is a good example of a mass dial. No. 2 has been much mutilated and made into a wheel. No. 3 appears to have had many lines added to it, and it is difficult to say which are the original.

#### WANSTROW CHURCH

52. This dial is on a quoin at the s.E. corner of the chancel, facing E. It is 6 feet above the ground, the noonline is 6 inches in length, the stylehole is  $1\frac{1}{4}$  inches deep by 1 inch in diameter, and the aspect is due E. Type 4.

July 1st, 1915.

The church was restored at considerable cost in 1877, and it was probably at that date that the dial stone was taken from its original position and built in facing E. and upside down as well.

#### WHATLEY CHURCH

53. This dial is on the s.w. corner of the s. transept, at a height of 3 feet 7 inches from the ground. The noonline is 6 inches in length, the stylehole is filled, and the aspect is s. by 15° E. Type 11, combining 4. October 7th, 1912.

This dial has been turned into a complete wheel, and the added lines are made with more care than is usual in such cases. (See No. 41.) The stylehole is filled with a piece of sheet iron rolled into a tube. Inside this tube is a large iron nail (?), and there is another nail below it. These additions to the stylehole do not look particularly modern. This dial is made with shallow holes or dents, as well as with lines, and it is of a handsome appearance.

# WOOLVERTON CHURCH

- 54. (1) This dial is on the w. side of the s. porch. It is 4 feet 5 inches above the ground, the length of the hour lines is  $8\frac{1}{2}$  inches, the stylehole is  $1\frac{1}{2}$  inches deep by 1 inch in diameter, and the aspect is due s. Type 3.
- 55. (2) This dial is on the E. side of the s. porch. It is 4 feet 2 inches above the ground, the noonline is 5 inches in length, the stylehole is  $\frac{3}{4}$  of an inch in depth, and 1 inch in diameter, and the aspect is due s. Type 3.
- 56. (3) This dial is on the s.E. face of the E. buttress of the s. porch. It is 3 feet 10 inches above the ground, the noonline is 3 inches in length, the stylehole is large and shallow, and the aspect is s.E. Type 4.

57. (4) This dial is on a quoin on the E. side of the first window to the E. of the s. porch. It is 5 feet above the ground, the noonline is  $2\frac{1}{4}$  inches in length, the stylehole is  $2\frac{3}{4}$  inches deep and much worn, and the aspect is s. by 20° E. Type 3.

58. (5) This dial is on the s.E. corner of the nave at a height of 5 feet 3 inches from the plinth. The noonline is 61 inches in length, the stylehole is  $2\frac{1}{2}$  inches deep by  $1\frac{1}{8}$  inches in diameter, and the aspect is s. by  $20^{\circ}$  E. Type 4.

(6) This dial is situated the same as the last named 1 foot 11 inches lower down. The noonline is 6 inches in length, the stylehole is 2 inches deep by 14 inches in diameter, and the aspect is the same as No. 5. Type 4. July 18th, 1913.

No noonline shows in dial No. 1, unless it be the joint in the stone. The other lines are very indistinct. In dial No. 2 the noonline and one other, in the usual mass line position, are fairly visible. This is probably the most ancient dial of the five. Dial No. 3 is poor, and has been considerably added to. Being on an angle buttress its aspect is s.E., but all the lines are now so mutilated that it is impossible to say what correction was made for this abnormal position. No. 4 is of the ordinary type, but much worn. Nos. 5 and 6 present some difficulties. The upper dial is probably the original and the two below it are merely copies, although some care has evidently been taken in making the larger of the two. should be noted that the stone is a particularly tempting piece to cut, being a fine grained, firm piece of sandstone that lends itself easily to the knife.

# KEYNSHAM DISTRICT

This district contains 14 parish churches, and of these, 7 churches contain 9 dials between them, one of which is doubtful.

The churches with dials are:

Compton Dando	1	North Stoke		1
Corston	2	Stanton Prior		1
Keynsham .	1*	Whitchurch		2
Newton St. Loe	1			

The churches at Priston and Queen Charlton are so covered with creepers that they cannot be thoroughly examined.

## COMPTON DANDO CHURCH

60. This dial is on the w. side of the first window E. of the s. porch. It is 3 feet 6 inches above the plinth (a deep area surrounds the church), the noonline is  $3\frac{1}{2}$  inches in length, the stylehole is  $1\frac{1}{4}$  inches deep by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by  $30^{\circ}$  E. Type 4. July 3rd, 1913.

This very clear dial contains several additional lines. There is what appears to be a deliberate hole at the end of the 9 a.m. line, and also at the end of the noonline. The stylehole is clear-cut and good.

### CORSTON CHURCH

61. (1) This dial is on a buttress at the E. end of the chancel, at a height of 4 feet 2 inches above the ground. The noonline is 5 inches in length, the stylehole  $\frac{1}{4}$  of an inch in depth, and the aspect s. by  $10^{\circ}$  E. Type 3.

62. (2) This dial is situated as the last named, but  $10\frac{1}{2}$  inches higher up. The noonline is 4 inches in length, the stylehole is  $\frac{3}{4}$  of an inch in depth, and the aspect the same as the above. Type 5a.

June 25th, 1913.

Both these dials are particularly poor and faint, and No. 2 is badly made as well.

# KEYNSHAM CHURCH

63. There is a doubtful dial on the buttress to the w. of the s. porch. There is also what may be a stylehole in the buttress to the E. of the s. porch. All the stone is badly weathered.

July 3rd, 1913.

# NEWTON ST. LOE CHURCH

64. This dial is on the w. side of the s. porch. It is 5 feet  $3\frac{1}{2}$  inches above the ground, the containing circle is  $7\frac{3}{4}$  inches in diameter, the stylehole is 3 inches deep, and the aspect is s. by  $20^{\circ}$  E. Type 8, combining 4. September 11th, 1911.

This dial has had some extra lines added to it, but it is fairly perfect. It is just possible the stone containing it has

been re-set, as the mortar differs from that of adjoining stones. The diameter of the ring— $7\frac{3}{4}$  inches—is exactly that of the dial on Stanton Prior Church, in the next parish.

#### NORTH STOKE CHURCH

65. This dial is on the E. buttress of the s. porch. It is 5 feet 5 inches above the ground, the noonline is  $4\frac{1}{2}$  inches in length, the stylehole was originally  $1\frac{1}{4}$  inches deep, and the aspect is s. by  $20^{\circ}$  w. Type 3. September 11th, 1911.

This dial is described at some length in the *Proc. Som.*Arch. Soc., xxxiv, pp. 50 and 127. The writer calls it "Saxon," but although the porch is evidently of great age, it is later than Norman, nor is the dial divided according to the Saxon method. There are many more dials of the same type in the county, and as they are frequently on late Perpendicular work (see Wellow, No. 26) they are not older than that period. The stylehole of this dial is badly injured, but . enough remains to show its original shape.

## STANTON PRIOR CHURCH

66. This dial is on the first buttress from the w. end, on the s. side. It is 5 feet above the ground. The diameter of the outer circle is  $7\frac{3}{4}$  inches, the next circle  $\frac{3}{4}$  of an inch less. Inside this, a circle  $\frac{5}{8}$  of an inch less, and the innermost one  $\frac{5}{10}$  of an inch less. The stylehole is  $1\frac{3}{4}$  inches deep, and a portion of the style seems to be remaining in it. The aspect is s. by 10° E. Type 8. September 11th, 1911.

This is one of the most beautiful dials in the county. Unfortunately the lower edge is broken away and roughly repaired with mortar, and the ivy growing over it is doing further damage. The diameter of the outer circle is the same as that of the dial at Newton St. Loe— $7\frac{3}{4}$  inches. Both dials appear to be the work of the same hand, but the dial in question is much more highly finished than its neighbour.

# WHITCHURCH (or FELTON) CHURCH

67. (1) This dial is on the w. buttress of the s. porch. It is 4 feet 7 inches above the ground, the distance of the noon-



Tintinhull Church, Somerset
Type 6

hole is  $3\frac{1}{2}$  inches, the stylehole is  $\frac{1}{2}$  an inch deep by  $\frac{3}{8}$  of an inch in diameter, and the aspect is s. by 5° w. Type 9.

68. (2) This dial is on the w. face of a quoin on the w. corner of the s. porch. It is 4 feet 1 inch above the ground, the distance to the noonhole is  $3\frac{1}{4}$  inches, the stylehole is  $\frac{1}{2}$  an inch deep, and the aspect is w. by  $10^{\circ}$  N. Type 9.

January 3rd, 1912.

Dial No. 1 has no lines but dents or dots to mark the hours, some of which appear to have been added. The stylehole is extremely shallow, and does not seem ever to have been deeper.

Dial No. 2 is nearly exactly similar in all respects to No. 1. The stone on which it is cut has been moved, probably from the E. side of the s. porch, and placed in its present position facing W.

#### LONG ASHTON DISTRICT

This district contains 23 parish churches, and of these, 8 churches have 10 dials between them, 3 of which are doubtful.

The churches with dials are:

Flax Bourton		1*	Walton-in	-Go	ordano	1
Portbury		1	Weston-in	-Go	ordano	1*
Portishead		1*	Wraxall .			$^2$
Tickenham		1	${f Yatton}$			$^2$

# FLAX BOURTON CHURCH

69. This dial is on a quoin stone at the s.E. corner of the chancel. It is 8 feet 9 inches from the ground, the radius of the circle is 4 inches, the stylehole is small and partly filled, and the aspect is s. by 10° w. See No. 12.

March 17th, 1914.

The dial is merely a plain circle incised with rather a broadline. No hour lines or holes show. There is lichen on the wall which grows up to the edge of the circle, but not within it. It is just possible that the dial may have been painted originally. It must rank as a doubtful one.

#### PORTBURY CHURCH

70. This dial is on the first buttress from the E. end of the s. aisle. It is 4 feet 10 inches from the ground, the noonline is 4 inches in length, and the stylehole is in a joint of the stone. The aspect is due s. Type 1. September 10th, 1911.

This is an interesting dial with the mass line broadened, and both the 6 a.m. and noonlines are formed by joints in the stone. The hard quality of the stone is shown by the way it has retained the tool-marks, and may account for the use of joints in place of lines. Plate IV.

#### PORTISHEAD CHURCH

71. This circle is on the eastern of the two buttresses on the s. side of the tower, and is four courses up from the plinth. The circle, which is out of reach, is 3 or  $3\frac{1}{2}$  inches in diameter, and has a faint trace of a stylehole. It is badly weathered, but the circle is complete and plain. It must rank as a doubtful dial.

September 10th, 1911.

## TICKENHAM CHURCH

72. This dial is on a quoin stone at the s.E. corner of the chancel. It is only 3 feet  $5\frac{1}{2}$  inches above the ground, the distance to the noonhole is  $6\frac{1}{2}$  inches, the stylehole is  $2\frac{3}{4}$  inches deep and  $\frac{5}{8}$  of an inch in diameter, and the aspect is s. by 5° E. Type 9. September 12th, 1911.

This dial is a good example of the Hole variety. The times are marked by holes, some of which are mere dents, and some are about 1 inch in depth, and probably held pegs. The holes corresponding to about 9 and 10 a.m. are the deepest. Certain lines have been drawn or scratched from the holes to the style, but they do not appear to belong to the original design, as they are badly made.

# Walton-in-Gordano Church

73. This dial is on a quoin stone at the s.w. corner of the s. aisle. It is 8 feet 8 inches from the ground, the circle is 9 inches in diameter, the stylehole open and shallow, and the aspect nearly due s. Type 4. September 12th, 1911.

This stone was brought from the old church at Walton with others, and used in the building of the new church here. The dial appears to have been placed on its side, with the noonline to the left, but it has been so mutilated that it is not easy to make out its exact position.

#### WESTON-IN-GORDANO CHURCH

74. This dial is on the E. side of the priest's door, immediately below the corbel head that terminates the dripstone. It consists of a faint circle with a filled-up stylehole. The stone is so weathered that this must rank as a very doubtful dial.

September 10th, 1911.

#### WRAXALL CHURCH

75. (1) This dial is on the E. side of the priest's door. It is 4 feet 10 inches above the ground, the noonline about 3 inches in length, the stylehole 1 inch deep, and the aspect s. by 20 E. Type 3.

76. (2) The second dial is on the w. side of the priest's door. It is 4 feet 10 inches above the ground, the noonline is about 6 inches in length, the stylehole 1 inch deep, and the aspect s. by 20° E. Type 3. September 14th, 1911.

The first of these two dials is on a stone that is partly cut away, and hence the dial is spoilt. This may account for making the second dial on the opposite side of the doorway. The two dials are in exactly corresponding positions.

# YATTON CHURCH

77. (1) This dial is on the outer buttress on the w. side of the s. porch. It is 4 feet 10 inches above the ground, the noonline is about  $3\frac{1}{2}$  inches in length, and the stylehole, if there be one at all, is carefully filled with hard cement. The aspect is s. by 17° E. Type 3. September 14th, 1911.

This dial is rather a difficult one to understand. The lines are clear and fairly ordinary, but the stylehole is filled in a way to so exactly match the stone that it is not easy to say there is one.

78. (2) On the outer buttress on the E. side of the s. porch is a dial that perhaps ought not to be counted among those treated of here. It is 5 feet 10 inches above the ground, the noonline is  $7\frac{1}{2}$  inches in length, the stylehole is  $1\frac{1}{2}$  inches in depth and 1 inch in diameter, and the aspect s. by  $17^{\circ}$  E.

This dial is probably XVII century. The stylehole slants upwards, and hence the style stood out at an angle, much as the gnomon does on an ordinary sundial. At the ends of the lines Arabic numerals have been cut. These figures are 6, 7, 8, 9 on the A.M. side, and 3, 4, 5, 6 on the P.M. side. There is a faint suggestion of 12 under the noonline. The face of the stone is weathered, and other marks are difficult to make out. The stylehole is easily seen, but the figures are most difficult to detect, although they stand out with great clearness in a photograph.

#### SHEPTON MALLET DISTRICT

This district contains 25 parish churches and one chapelry. Of these, 11 churches have 16 dials between them, 2 of which are doubtful.

The churches with dials are:

Chesterblade (chape	lry)	1	Lamyat		2
West Cranmore		1	East Pennard		1
Croscombe .		1*	Pilton		2
Milton Clevedon		1	Stratton-on-the-Fosse	;	3
Doulting		2	Upton Noble		1
Everereech .		1*			

# CHESTERBLADE CHAPELRY

79. This rough dial is situated on the E. side of the s. porch and is 5 feet 4 inches from the ground. The noonline is 3 inches in length, and the stylehole, which is in a joint of the stonework, is about  $1\frac{1}{4}$  inches in depth. The aspect is s. by 5° E. Type 2. July 28th, 1913.

Chesterblade is an ancient chapelry, but chapels of this kind have been included with the parish churches for the purposes of this collection.

#### WEST CRANMORE CHURCH

80. This dial is cut upon the s.w. buttress of the tower, at a height from the ground of 5 feet 3 inches. The noonline is  $4\frac{1}{2}$  inches in length, the stylehole being  $3\frac{1}{2}$  inches in depth by  $\frac{3}{4}$  of an inch in diameter. The aspect is s. by  $3^{\circ}$  w. Type 4.

October 4th, 1912.

This dial has been added to until it is almost wheel-shaped. The additional lines in the upper half of the circle are much sharper and fresher than the original incisions, which are a good deal weathered. (See Nos. 41 and 53.)

#### CROSCOMBE CHURCH

81. On a buttress to the w. of the priest's door into the chancel is a stylehole at a height of 5 feet 10 inches from the ground. There are no remains of either a circle or lines, but from the soft nature of the stone they may have been weathered away.

October 8th, 1911.

#### MILTON CLEVEDON CHURCH

82. This curious dial is on the s. wall of the chancel, and is easily found. It is 4 feet 5 inches from the ground, and the distance between the stylehole and the noonhole is 4 inches. The stylehole is  $1\frac{3}{4}$  inches in depth and the aspect is s. by 5° w. Type 9.

June 4th, 1912.

There appears to be little doubt but what this arrangement of five holes is really a dial. While no other has been found exactly like it, it shows a family likeness to those on the churches at Seavington St. Mary (124), White Lackington (128), and others.

The chancel wall of Milton Clevedon Church was rebuilt in 1874, and the dial stone is probably not in its original position.

#### DOULTING CHURCH

83. (1) This double dial is cut upon a buttress at the s.w. corner of the nave, and is 5 feet 11 inches from the ground. It consists of a half circle of 12 holes, and contained within it is a scratch dial of five lines.

In the former dial, the distance from the style to the noon-hole is 7 inches. The stylehole, which was in a joint of the stonework, is filled up. The aspect is s. by 20° E. Type 9.

August 28th, 1913.

As this dial is more developed than the small dial contained within it, it is probably the later of the two.

84. (2) The second dial, described above, is situated within the last named. The length of the noonline is  $4\frac{3}{4}$  inches, and the stylehole, which was in a joint, is filled up. The aspect is the same as the above. Type 2.

September 16th, 1913.

This dial is most difficult to see when the sun is in front of it. When the sun is in the w. and shining across it, all the lines show plainly.

#### EVERCREECH CHURCH

85. There is a circle on the s.e. buttress of the tower with a radius of  $5\frac{1}{2}$  inches. It is 5 feet 2 inches from the ground, and the stylehole is extremely shallow. The aspect is s. by  $5^{\circ}$  E. (See No. 12.)

The circle is quite clear, but there are no hour-lines. The very shallow stylehole makes this a doubtful dial.

# LAMYAT CHURCH

86. (1) This dial is situated low down on the buttress which is w. of the s. porch. It is only 3 feet 3 inches from the ground, and the noonline is  $4\frac{1}{4}$  inches in length. The stylehole is filled up. The aspect is due w. Type 5a.

The stone on which the dial is cut has evidently been moved at some time to its present position facing w., and to judge from the apparent age of the buttress in which it is situated this transfer must have taken place at a remote period. To the left there is a rough "copy" dial.

87. (2) A second dial is situated on this church on the first buttress to the E. of the s. porch. It is about 6 feet 4 inches from the ground, the noon-line is 4 inches in length, and the stylehole, which was in a joint of the masonry, is filled up. The aspect is due s. Type 2. October 16th, 1913.

This poor and ill-made dial seems to be in its original position. All its lines are wavering and indistinct.



Compton Pauncefoot Church, Somerset  ${\rm Type}\ 7$ 

### EAST PENNARD CHURCH

88. This dial is cut at the entrance to the s. porch, on the E. side. It is 5 feet 6 inches from the ground, the noon-line is 3 inches in length, and the stylehole is 1 inch deep and  $\frac{1}{2}$  an inch in diameter. The aspect is s. by  $10^{\circ}$  E. Type 4.

August 18th, 1913.

This dial has been badly mutilated, considerably more than half the lines being additions to the original.

There is also on a buttress to the E. of the priest's (modern) door into the chancel, at a height of 4 feet 8 inches from the ground, a stylehole, and part of a circle above it, at  $3\frac{3}{4}$  inches radius. There are no other marks of any kind, and if it be a dial at all it must be very ancient.

#### PILTON CHURCH

89. (1) This dial is cut upon a buttress between the tower buttress and the s. porch. It is 5 feet 3 inches from the ground, the noonline is 6 inches in length, and the stylehole is  $3\frac{1}{8}$  inches in depth by  $\frac{3}{4}$  of an inch in diameter. The aspect is s. by  $10^{\circ}$  w. Type 8. August 18th, 1913.

This bold and simple dial must have been moved from its original position, and a portion of the stone on the left hand or w. side cut off. The single mass line is very distinct.

90. (2) A second dial is situated on the w. side of the priest's door. It is 4 feet  $8\frac{1}{2}$  inches from the ground, the noonline is 4 inches in length, and the stylehole is shallow and partly filled. The aspect is s. by 15° w. Type 5c.

August 18th, 1913.

The stone on which the dial is cut is soft and much worn. Above the stylehole the remains of a circle are visible.

# STRATTON-ON-THE-FOSSE CHURCH

91. (1) This dial is situated on the s.w. corner of the nave, on a quoin stone. It is 7 feet from the ground, the noonline is 3 inches in length, and the stylehole is  $1\frac{1}{2}$  inches in depth. The aspect is s. by 3° w. Type 3.

The mass line in this dial is sharp and distinct, and made at a different time from the other lines.

92. (2) A second dial is at the entrance to the s. porch. on the w. side. The height is 3 feet 3 inches from the ground. the noonline 31 inches in length, and the stylehole 3 of an inch in depth and about \frac{1}{2} an inch in diameter. The aspect is s. by 5° w. Type 3.

93. (3) A third dial is on the buttress between the s. porch and the E. end of the nave. It is 5 feet 1 inch from the ground. the radius of the outer circle is 4 inches, and the stylehole is 2 inches in depth and  $\frac{1}{2}$  an inch in diameter. The aspect is s. by 5° w. (See No. 12.) November 3rd, 1913.

No hour lines can be seen on this ancient and badly worn dial. Outside the stylehole at a distance of 4 inches, are the remains of two circles, one within the other, with 3 of an inch space between them.

## UPTON NOBLE CHURCH

94. This dial is situated between the two windows on the s. side. It is 5 feet 1 inch from the ground, the distance to the noonhole is  $4\frac{1}{2}$  inches, and the stylehole is  $3\frac{1}{8}$  inches in depth by ½ an inch in diameter. The aspect is s. by 15° w. Type 9. July 28th, 1913.

This dial has been turned upside down, probably in the "restoration" in 1881, and a down pipe for rainwater runs across its face. It is in perfect condition and appears to be free from additions. The hours are marked by holes drilled into the wall, and there are no lines visible.

# WELLS DISTRICT

This district contains 15 parish churches, and of these, 7 have 12 dials between them, 5 of which are doubtful.

The churches with dials are:

Baltonsborough	1		Westbury .	1	
Butleigh .	2		Wookey .	1*	
Dinder	1		North Wootton	1	1*
Rodney Stoke	1	3*			

#### BALTONSBOROUGH CHURCH

95. This dial is on the w. side of the s. porch, at a height of 4 feet  $10\frac{1}{2}$  inches from the ground, the noonline is 4 inches in length and the stylehole is  $1\frac{1}{2}$  inches in depth by 1 inch in diameter. The aspect is due s. Type 5c. May 26th, 1914.

This strongly cut and bold dial contains the metal shank of the style at the bottom of the hole. It has a cross cut on the top, where it is broken off, and this may have been made with a chisel in modern times.

## Butleigh Church

- 96. (1) This dial is on the w. side of the s. porch, at a height of 5 feet  $7\frac{1}{2}$  inches from the ground. The noonline is  $3\frac{3}{4}$  inches in length, the stylehole  $\frac{1}{2}$  an inch in depth by  $\frac{1}{4}$  of an inch in diameter, and the aspect is s. by  $15^{\circ}$  E. Type 8.
- 97. (2) Below the above dial, at a height of 4 feet from the ground, is another. The noonline is 6 inches in length, the stylehole, which is large, is filled with cement. Aspect as above. Type 5c.

  May 26th, 1914.

# DINDER CHURCH

98. This dial is on the w. corner of the s. aisle, at a height of 5 feet 8 inches from the ground. The noonline is  $4\frac{1}{4}$  inches in length, the stylehole is  $2\frac{1}{2}$  inches in depth, and the aspect is s. by  $20^{\circ}$  E. Type 7. October 6th, 1911.

This dial is cut on soft red sandstone, and has all 12 hour lines, but many of them have probably been added to the original design.

# RODNEY STOKE CHURCH

99. (1) This dial is cut on the E. buttress of the tower, which is at the w. end of the church, at a height of 4 feet 9 inches from the ground. The noonline is  $2\frac{1}{2}$  inches in length, and the stylehole is 1 inch deep and  $\frac{1}{2}$  an inch in diameter. The aspect is s. by  $20^{\circ}$  E. Type 10, dents, not holes.

August 12th, 1913.

100. (2) At a short distance to the w. on the same stone is a stylehole with dots round it, the length of the noon distance being  $3\frac{1}{2}$  inches.

101 and 102. (3) and (4). To the w. of this, again, are two more dials. These three dials are very doubtful, and may be only "copy" dials of the original one.

## WESTBURY CHURCH

103. This dial is on a quoin stone at the s.E. corner of the chancel. It is 5 feet above the ground, the noonline is 5 inches in length, and the stylehole  $1\frac{1}{2}$  inches in diameter at the face, narrowing to  $\frac{1}{2}$  an inch. It is  $2\frac{1}{4}$  inches in depth, and the aspect is s. by  $22^{\circ}$  E. Type 3. August 12th, 1913.

The lines are very thin, and the large stylehole looks as if

it was originally cut this size.

## WOOKEY CHURCH

104. This dial is on the w. side of the s. porch. It is 4 feet 6 inches above the ground, the radius measures about  $3\frac{1}{2}$  inches, and the stylehole is filled up, if it exists at all. The aspect is s. by  $10^{\circ}$  E. (See No. 12.) March 24th, 1914.

The circle is quite complete, but it is without lines or holes, and the stylehole shows but very slightly. There is a good

deal of ivy on other likely places.

# NORTH WOOTTON CHURCH

105. (1) This dial is on a buttress at the E. end of the nave, at a height of 4 feet 9 inches from the ground. The noonline is  $2\frac{1}{4}$  inches in length, the stylehole, which is large, is filled with mortar, and the aspect is s. by 30° E. Type 4.

106. (2) A second dial is on the w. side of the priest's door. It is 3 feet 11 inches above the ground, the noonline is  $1\frac{1}{2}$  inches in length, the stylehole, which is very shallow, is partly filled. The aspect is s. by 30° E. Type 10, dents, not holes. This latter is a somewhat doubtful dial.

August 18th, 1913.

# PART II

## SOUTH SOMERSET

Containing the dials upon the churches in the districts of

BRIDGWATER. WELLINGTON.
CHARD. WILLITON.
DULVERTON. WINCANTON.
LANGPORT. YEOVIL.

TAUNTON.

### BRIDGWATER DISTRICT

This district contains 39 parish churches, and of these, 8 churches have 8 dials between them, 4 of which are doubtful. The churches with dials are:

Charlinch		1	Pawlett .		1
Durleigh .		1*	Puriton .		1*
Goathurst		1	Shapwick		1*
Moorlinch		1	Stawell .		1*

The church at Cossington is so covered with creepers that it cannot be thoroughly examined.

# CHARLINCH CHURCH

107. This dial is upside down at the foot of the s.w. buttress of the tower, where it has been used to effect a repair. It is 1 foot 5 inches from the ground, the noonline is 6 inches in length, the stylehole is shallow, and the aspect is s.w. Type 3.

September 23rd, 1914.

# DURLEIGH CHURCH

108. This dial is on the E. side of the s. porch. It is about 2 feet from the ground, and appears to have a very large stylehole which is blocked up. The stone is so badly weathered that the dial is most indistinct and doubtful.

September 22nd, 1914.

#### GOATHURST CHURCH

109. This dial is on the w. side of the inner door of the s. porch. It is 4 feet 7 inches from the ground, the noonline, which is very indistinct, is about  $3\frac{1}{2}$  inches in length, and the stylehole is filled up. Type 3, perhaps 4.

September 24th, 1914.

The "restorers" have scraped the face of this dial flat, and have tried to fill in the lines, which are consequently most indistinct. The covering porch appears to be work of the Perpendicular period.

# MOORLINCH CHURCH

110. This dial is on the w. side of the s. porch. It is 4 feet 7 inches above the ground, the noonline is 4 inches in length, the stylehole is shallow and  $\frac{5}{8}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  w. Type 3. September 24th, 1914.

This is a poor scratchy dial, much added to.

## PAWLETT CHURCH

111. This dial is on a quoin at the w. corner of the s. transept. The height is 4 feet 4 inches above the ground, the noonline is 4 inches in length, and the style, which is broken off just below the surface, was made of a whitish metal, half an inch in diameter. Type 5b. September 6th, 1911.

Several lines have obviously been added to the original design.

PURITON CHURCH

112. There is a figure something like a dial on the left corner of the stair turret to the tower. It consists of a circle  $5\frac{3}{4}$  inches in diameter, without a central hole, and with 12 radii dividing the circle equally. It does not appear to be very old, and the absence of a stylehole shows that it was probably not a dial.

September 6th, 1911.

# SHAPWICK CHURCH

113. This dial is on a quoin at the s.E. corner of the chancel. It is 2 feet 7 inches from the ground, the noonline was probably 4 inches in length, the stylehole is large, open and shallow. The aspect is s.

September 24th, 1914.



Rimpton Church, Somerset
Type 8

This dial is extremely doubtful. It is on a badly weathered stone, there are no lines, and the dents in the A.M. quarter, which are indistinct, may have resulted from the friable nature of the stone.

### STAWELL CHURCH

114. On the w. side of the priest's door, at a height of 4 feet 2 inches above the ground, is a shallow stylehole. The stone is much weathered. No marks of any kind are visible.

May 13th, 1913.

#### CHARD DISTRICT

This district contains 31 parish churches and one chapelry. Of these, 12 churches have 17 dials between them, one of which is doubtful.

The churches with dials are:

Ashill		3	Seavington St. Mary	1
Broadway .		$^2$	Seavington St. Michael	1
Crewkerne .		1	Stocklinch Ottersay .	1*
Dinnington (chape	elry)	1	Wayford	1
Hinton St. George		1	Whitelackington .	1
Kingstone .		1	Winsham	3

# ASHILL CHURCH

- 115. (1) This dial is on the s.e. corner of the nave. It is 6 feet above the ground, the noonline is  $2\frac{1}{2}$  inches in length, the stylehole is  $1\frac{1}{4}$  inches deep by 1 inch diameter, and the aspect is s. by  $10^{\circ}$  E. Type 2.
- 116. (2) About 10 inches to the E. of the above is another dial, which may be only a copy. The noonline is  $2\frac{1}{2}$  inches in length, the stylehole, which is in a joint, is filled, and the aspect is as above. Type 2.
- 117. (3) Two feet below the last named is another, also probably a copy. The moonline is  $4\frac{1}{2}$  inches in length, the stylehole, which is in a joint, is filled, and the aspect is as above. Type 2. August 16th, 1915.

It is rather difficult to determine whether Nos. 2 and 3 are only copies of No. 1 or whether they are original.

### Broadway Church

118. (1) This dial is on the w. side of the s. window in the s. transept. It is 5 feet above the ground, the noonline is 4 inches in length, the stylehole is  $1\frac{3}{4}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $12^{\circ}$  E. Type 3.

119. (2) This dial is on the E. side of the s. window in the s. transept. It is 5 feet 2 inches above the ground, the noonline is 3 inches in length, the stylehole is shallow by  $\frac{1}{2}$  an inch

in diameter, and the aspect s. by 12° E. Type 3.

August 16th, 1915.

A few lines have been added to dial No. 1, and dial No. 2 has the mass line  $(4\frac{1}{2}$  inches) much longer than the others. It is just possible, from the appearance of the setting, that both these stones have been moved at some time.

### CREWKERNE CHURCH

120. This dial is on the first buttress from the E. end of the chancel. It is 4 feet 5 inches above the ground, the noonline is 3 inches in length, the stylehole is  $3\frac{1}{4}$  inches in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  E. Type 3.

June 8th, 1915.

The lines on this dial are distinct in sunlight, but difficult to see in ordinary light. There is an enlarged hole at the end

of what is probably the mass line.

# DINNINGTON CHAPELRY

121. This dial is on the  $\mathbb{E}$ . side of the second window from the s. porch. It is 6 feet above the ground, the noonline is  $3\frac{1}{4}$  inches in length, the stylehole is  $1\frac{1}{2}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $12^{\circ}$   $\mathbb{E}$ . Type 4, combining 5c.

August 18th, 1915.

This is a full wheel dial, and the added lines have been cut with some care, so that they look almost as good as the original

lines.

# HINTON ST. GEORGE CHURCH

122. This dial is on the s. face of a buttress at the w. end of the s. aisle. It is 5 feet 8 inches above the ground, the noonline is 3 inches in length, and the stylehole  $\frac{1}{2}$  an inch deep

to the top of the iron style, which is still within it. The aspect is s. by 30° E. Type 3. August 18th, 1915.

The stone on which this dial is cut has been moved and laid on its side, so that the lines are now in the upper left quarter. The lines, which are few, are quite sharp and have not been added to. It is an interesting primitive dial.

### KINGSTONE CHURCH

123. This dial is on the E. side of the s. porch. It is 3 feet above the ground, the noonline is 4 inches in length, and the styleholes, of which there are two side by side, are 3 inches in depth by  $\frac{3}{4}$  of an inch in diameter. The aspect is s. by  $10^{\circ}$  E. Type 3. August 18th, 1915.

This dial is badly weathered, and the lines most indistinct. Its interest lies in having had two styles, which may have served to denote summer and winter time, as the lines appear

to work from both holes.

### SEAVINGTON ST. MARY CHURCH

124. This dial is on a buttress half-way between the s. porch and chancel. It is about 5 feet 5 inches above the ground, the noonline is  $3\frac{1}{2}$  inches in length, the stylehole is  $\frac{1}{2}$  an inch deep to the top of the metal shank which is still within it, and about  $\frac{1}{2}$  an inch in diameter. The aspect is s. by 15° E. Type 11. September 7th, 1912.

On the noonline, close to the stylehole, is a hole for a peg, and there is another at the extreme end of this line in the next stone. There is also a peg-hole on the mass line.

# SEAVINGTON ST. MICHAEL CHURCH

125. This dial is on the w. side of a blocked-up s. door. It is 4 feet 5 inches above the ground, the noonline is  $3\frac{1}{4}$  inches in length, the stylehole is  $1\frac{1}{8}$  inches deep, and the aspect is due s. Type 3. September 7th, 1912.

The buttresses right and left of this closed s. door cut off the sunlight from the dial at this date at 11.30 a.m., but they appear to be a late addition to the church—probably XVIII century (?), when the door was filled up.

## STOCKLINCH OTTERSAY CHURCH

126. There is a doubtful dial on the E. side of the priest's door. It is in a likely position, but the stone is so badly weathered that no lines can be traced upon it.

September 12th, 1912.

### Wayford Church

127. This dial is on the E. side of the inner door of the s. porch. It is 4 feet 11 inches above the floor, the noonline is only  $1\frac{1}{4}$  inches in length, the stylehole is 1 inch deep by  $\frac{5}{8}$  of an inch in diameter, and the aspect is due s. Type 3.

August 19th, 1915.

This is a quaint and probably very ancient little dial. The A.M. lines are longer than the noonline, which is cut off by the edge of the stone. The porch over this dial looks extremely old. The head of the outer door is cut from one huge piece of stone in the form of a rough debased arch, and is of the most primitive kind of workmanship.

### Whitelackington Church

128. This dial is on a buttress at the w. corner of the s. transept. It is 4 feet 9 inches above the ground, the distance to the hour-holes is  $3\frac{1}{2}$  inches, the stylehole is  $1\frac{3}{4}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $20^{\circ}$  E. Type 9. September 5th, 1912.

This dial is nearly unique. The stylehole is of great size, and does not seem to have been enlarged. The noonhole, if it be one, is in the joint of a stone below. No other holes show except those for three early morning hours, and one of these is doubled, i.e. it has a second hole inside it, nearer the stylehole. These holes are deep enough to hold pegs.

## WINSHAM CHURCH

129. (1) This dial is on the E. side of the window on the w. of the priest's door. It is 6 feet 5 inches above the ground, the noonline is 6 inches in length, and the stylehole is 2 inches deep by  $\frac{3}{4}$  of an inch in diameter. The aspect is s. by  $10^{\circ}$  E. Type 5b.

130. (2) This dial is on the w. side of the priest's door. It is 5 feet  $2\frac{1}{2}$  inches above the ground, the noonline is  $3\frac{1}{2}$  inches in length, the stylehole 1 inch deep by  $\frac{1}{2}$  an inch in diameter, and the aspect as above. Type 3a or 5b.

131. (3) This dial is on the w. side of the window  $\mathbb{E}$ . of the priest's door. It is 6 feet 3 inches above the ground, the noonline is  $6\frac{1}{4}$  inches in length, and the stylehole, which is large, is filled with cement. The aspect as above. Type 4, combining 5c.

August 19th, 1915.

The dials Nos. 1 and 3 are carefully cut on very large stones that form the quoins of the windows on either side of the priest's door.

## DULVERTON DISTRICT

There are no dials upon any of the 13 parish churches within this district.

# LANGPORT DISTRICT

This district contains 28 churches, and of these, 12 have 20 dials between them, 5 of which are doubtful. One church, Beer Crocombe, cannot be examined thoroughly as it is covered with creepers.

The following are the churches with dials:

Aller .		2		High Ham .	1
Babcary .		1	1*	Keinton Mandeville	1
Barrington		1	2*	Kingsbury Episcopi	1
Barton St. Da	vid	1		Kingsdon .	3
Curry Rivel		1	1*	Puckington .	1
Fivehead		1		Somerton .	$1^*$

## ALLER CHURCH

132. (1) These two dials are inside the s. porch, on the E. side of the inner doorway, on the capital of the Norman arch. The height from the ground is 6 feet 7 inches, the length of the hour lines is about 3 inches, the stylehole, which is filled, is in a joint, and the aspect is s. by 5° E. Type 2.

133. (2) The second dial is 7 inches below No. 1. The length of the noonline is 4 inches, the style, which is in a joint, appears to have the metal shank of the style level with the face of the stone, and the aspect is s. by  $5^{\circ}$  E. Type 2.

September 9th, 1912

These dials are both cut upon early Norman work, although they may be later than the stone on which they are placed.

### BABCARY CHURCH

134. (1) This dial is on the w. side of the s. porch. It is 4 feet 9 inches above the ground, the noonline is about 3 inches in length, the stylchole is only  $\frac{3}{16}$  of an inch deep, and the aspect is s. by  $40^{\circ}$  E. Type 3. September 10th. 1912.

This is a faint scratchy dial, and the stylehole may still contain the style. The face of the stone is as much as 40° out of the true.

135. (2) About a foot below the above dial is apparently another, but it is extremely doubtful if it be one, or is anything more than a copy of No. 1.

# BARRINGTON CHURCH

136. (1) This dial is on a buttress at the w. corner of the s. transept. It is about 5 feet 6 inches above the ground, the length of the noonline is 3 inches, the stylehole, which is much worn, is  $1\frac{3}{4}$  inches deep and  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $20^{\circ}$  E. Type 4. September 7th, 1912.

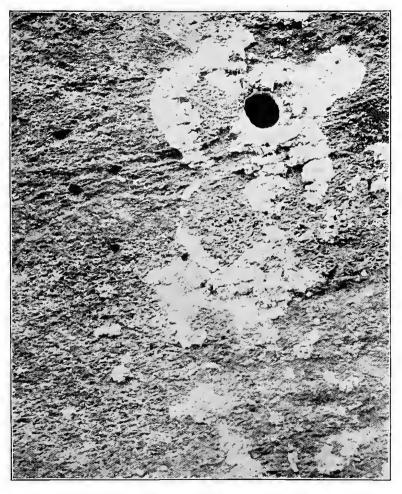
This dial has been added to and made into a wheel.

137. (2) To the E. and at a distance of  $7\frac{1}{2}$  inches is another doubtful stylehole, with perhaps dots below it.

138. (3) Nine inches above is another stylehole, with one distinct P.M. line coming from it.

## BARTON ST. DAVID

139. This dial is on the w. side of an old blocked-up doorway on the s. side of the church. It is 2 feet 5 inches above the ground, the noonline is 5 inches in length, and the stylehole,



Whitelackington Church, Somerset  $Type\ 9$ 

which was in a joint, does not show. The aspect is s. by 15° E. The dial stone has probably been moved, as there are no signs of a stylehole, but the rays require a style in the joint. Type 2.

May 26th, 1914.

### CURRY RIVEL CHURCH

140. (1) This dial is on a buttress at the s.E. corner of the chancel. It is 4 feet 8 inches above the ground, the lines about  $4\frac{1}{2}$  inches in length, the stylehole is  $\frac{3}{4}$  of an inch in depth, and the aspect is s. by  $27^{\circ}$  E. Type 3.

141. (2) There is a second doubtful dial on the s.w. buttress of the s. porch.

September 6th, 1912.

The stone is soft and rather badly weathered.

### FIVEHEAD CHURCH

142. This dial is on the E. side of the priest's door. It is 5 feet above the ground, the noonline is  $4\frac{1}{2}$  inches in length, the stylehole  $1\frac{1}{2}$  inches in depth and  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $5^{\circ}$  E. Type 3. September 6th, 1912.

This dial is not easy to see, as a rose tree is growing over it.

# High Ham Church

143. This dial is on the w. side of the s. porch. It is 5 feet 6 inches above the ground, the diameter is  $7\frac{1}{2}$  inches, the stylehole is 1 inch deep and about  $\frac{1}{2}$  an inch in diameter, and the aspect is due s. (See No. 12.) September 9th, 1912.

This is a complete circle without any hour lines. On the circle are some small holes or dents which mark early A.M. hours. It is a somewhat doubtful dial.

## KEINTON MANDEVILLE CHURCH

144. (1) This dial is on a quoin stone at the s.E. corner of the chancel. It is 5 feet  $1\frac{1}{2}$  inches above the ground, the noonline is  $2\frac{3}{4}$  inches in length, the stylehole is  $1\frac{1}{4}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  E. Type 3.

145. (2) Ten inches below is a second dial, the noonline is  $2\frac{1}{2}$  inches in length, the stylehole is  $1\frac{3}{4}$  inches deep and  $\frac{3}{4}$  of an inch in diameter, and the aspect is the same as the above. Type 3. May 26th, 1914.

On opening the stylehole of No. 1 fragments of the oak

style were removed.

### KINGSBURY EPISCOPI CHURCH

146. This dial is on the western buttress on the s. side of the tower. It is 7 feet 10 inches above the ground, and 11 inches in diameter. The stylehole, which appears to be deep (the dial is out of reach), is an inch in diameter. It contains twenty-four lines in all. Type 4. September 5th, 1912.

This dial is a complete wheel of thin lines without a circle. It has probably been moved to its present position at some restoration of the tower, as it would not be subject to muti-

lation where it now is, nearly 8 feet from the ground.

## Kingsdon Church

147. (1) This dial is on the E. buttress of the tower. It is 7 feet 8 inches above the ground, on a band of hard stone that is let into the blue lias of which the buttress is built. The noonline is 4 inches in length, the stylehole, which is in a joint, is filled, and the aspect is s. by 10° E. Type 2.

148. (2) The second dial is on the w. side of the s. porch. It is 5 feet 5 inches above the ground, the noonline is about 5 inches in length, the stylehole is open and badly shaped, and

the aspect is s. by 10° E. Type 3.

149. (3) This dial is on the E. side of the inner door of the s. porch. It is 2 feet 7 inches from the ground, the noonline is 3 inches in length, the stylehole, which is in a joint, is filled. Type 2. October 1st, 1914.

This third dial is extremely low down, and yet it appears to be in its original position. It is cut on a stone which forms part of the moulding of the doorway, and it is difficult to see how it could have been in any other position.

#### Puckington Church

150. This dial is on the w. side of the priest's door. It is 3 feet 10 inches above the ground, the lines are about  $2\frac{1}{2}$  inches in length, and the stylehole is small. Type 3a.

September 7th, 1912.

Two early A.M. lines are all that show, but the stone is badly weathered, and others may have been on it.

### Somerton Church

151. This doubtful dial is on the s.w. corner buttress, is without stylehole or lines, and is merely a plain circle. Somewhat lower down is a hole like a stylehole, but it has neither hour lines nor circle. The stone is fairly badly weathered. September 10th, 1912.

### TAUNTON DISTRICT

This district contains 38 parish churches, and of these, 6 churches have 8 dials between them, 3 of which are doubtful.

The churches with dials are:

Creech St. Michael	1 2*	Lydeard St. Lawrence	1
North Curry .	1*	Staplegrove	1
Halse	1	Stoke St. Gregory .	1

The church at Cothelstone is so covered with creepers that it cannot be thoroughly examined.

# CREECH ST. MICHAEL CHURCH

- 152. (1) This dial is on the w. side of the s. porch, 4 feet 8 inches above the ground. The noonline is 4 inches in length, the stylehole is filled, and the aspect is s. by  $8^{\circ}$  E. Type 2.
- 153. (2) This dial is close by the side of the above, on the E., the noonline is 4 inches in length, the stylehole is filled, and the aspect as above. Type 2.
- 154. (3) Six inches above No. 2 is a dial with noonline 3 inches in length, the stylehole filled, and the aspect as above. Type 2. September 24th, 1913.

All three of these dials are close together, very poor in construction, and one or other of them is probably only a "copy" dial, but the lines of all have been added to, and it is difficult to say which is the original.

### NORTH CURRY CHURCH

155. There is a doubtful dial on the w. side of the s. porch. It consists of a much worn stone, with a stylehole (?) which is filled up, and some marks that might be lines. The stone is so soft and worn that it is impossible to say with certainty whether it was once a dial.

September 9th, 1912.

### HALSE CHURCH

156. This dial is on the  $\mathbb{E}$ . side of the first window  $\mathbb{E}$ . of the s. porch. It is 6 feet 6 inches above the ground, the noonline was  $3\frac{1}{2}$  inches in length, the stylehole is  $\frac{5}{8}$  of an inch deep, and the aspect is s. by  $25^{\circ}$  w. Type 3. August 20th, 1915.

The stone on which the dial is cut is a window quoin, which was refaced when the window was renovated, with the result that the lines are nearly scraped away.

## LYDEARD ST. LAWRENCE CHURCH

157. This dial is on the E. side of the priest's door. It is 3 feet 9 inches above the plinth, the noonline is  $5\frac{1}{2}$  inches in length, the stylehole  $2\frac{1}{2}$  inches deep by 1 inch in diameter, and the aspect is s. by  $15^{\circ}$  E. Type 3. September 27th, 1913.

The stylehole is large and oval, and may have been made so in efforts to extract the style.

## STAPLEGROVE CHURCH

158. This dial is on an angle buttress to the E. of the door under the tower. It is 5 feet 3 inches above the ground, the radius of the circle is 3 inches, the stylehole is  $1\frac{1}{2}$  inches deep by  $\frac{3}{8}$  of an inch in diameter, and the aspect is s. by  $30^{\circ}$  E. (See No. 12.)

September 25th, 1913.

This dial consists of a complete circle with a good stylehole, but without lines or other marks. The face of the stone is so badly weathered that marks may easily have existed on it originally.

## STOKE ST. GREGORY CHURCH

159a. This dial is on the E. side of the s. porch. It is 5 feet 5 inches above the ground, the noonline is about 5 inches in length, the stylehole is filled with hard mortar, and the aspect is s. by 20° E. Type 4. September 9th, 1912.

This dial has been decorated. The noonline is lengthened outside the circle, and ends in a small cross. This cross is plainly an addition. The noonline is also carried upwards above the circle and also ends in a cross. This cross may be original. The line throughout its length is true and clean cut, so that it may be part of the primitive dial.

159b. This dial is within the church, on the w. splay of the easternmost window in the s. wall. It is on the top stone of the splay, the noonline is about 5 inches in length, and the stylehole, which appears to be an inch in diameter, is filled with plaster. Type 5b.

November 20th, 1916.

This dial is the only one that has been found inside a church. It was obviously placed in its present position at the time the late XV century window was inserted, and must have been brought from some other part of the building.

# WELLINGTON DISTRICT

This district contains 18 parish churches, one of which has a dial.

The church at Bradford is covered with creepers and cannot be thoroughly examined; the churchyard at Wellington is always locked up, and this church has therefore not been visited. It probably has no dial.

Visited September 25th, 1913, and August 20th, 1915.

## Oake Church

160. This dial is on the E. side of the doorway under the central tower. It is 6 feet 5 inches above the ground, the

noonline is  $4\frac{1}{2}$  inches in length, the stylehole is  $2\frac{1}{2}$  inches in depth by 11 inches in diameter, and the aspect is s. by 30° E. September 27th, 1913. Type 3.

This large and boldly cut dial is somewhat weathered and

a little added to.

### WILLITON DISTRICT

This district contains 36 parish churches, and of these, 3 have dials, 2 of which are doubtful.

The churches with dials are:

Kilve East Quantoxhead . 1 Monksilver 1\*

### KILVE CHURCH

161. On the E. side of the priest's door there is a very faint eircle and a suggestion of a stylehole. The stone is so badly weathered that it is not possible to say whether this was once a dial. September 22nd, 1914.

## Monksilver Church

162. This dial is on the wall E, of the first buttress from the s. porch. It is 4 feet  $1\frac{3}{4}$  inches above the ground, the noonline is 2 inches in length, the stylehole is shallow and of an inch in diameter, and the aspect is due s. (See No. 12.)

September 9th, 1914.

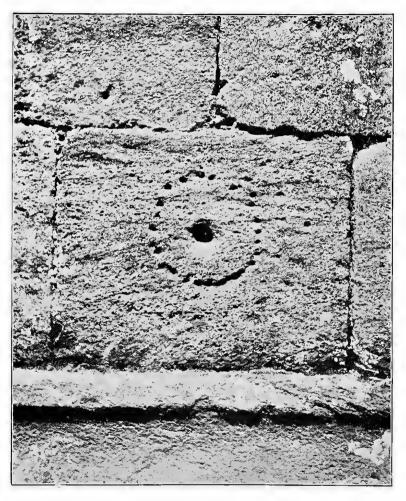
This is a very doubtful dial. The stylehole is hardly worth calling one, and the lines are scarcely visible. The circle is clear.

## East Quantoxhead

163. This dial is on the E. side of the priest's door. It is 5 feet 3 inches above the ground, the noonline is 7 inches in length, the stylehole, which is closed, is in a joint, and the aspect is s. by 20° E. Type 2. September 22nd, 1914.

The noonline is probably longer than it was originally by

an inch or two.



Martock Church, Somerset
Type 10

### WINCANTON DISTRICT

This parish contains 36 parish churches and 2 parochial chapels. Of these, 12 churches have 20 dials between them.

The churches with dials are:

Alford	1	Charlton Musgrove .	1
Blackford	2	Compton Pauncefoot	2
Brewham, South .	$\overline{2}$	Holton	$^2$
Cadbury, North .	3	Lovington	1
Cadbury, South .	1	Queen Camel	2
Charlton Horethorne	<b>2</b>	Weston Bamfylde .	1

#### Alford Church

164. This dial is on a buttress at the s.E. corner of the nave, at a height of 3 feet 10 inches from the ground. The noonline is 4 inches in length, the stylehole is an inch deep by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by 10° E. Type 7.

May 26th, 1914.

This dial is very perfect, and probably but little has been added to it.

## BLACKFORD CHURCH

- 165. (1) This dial is on the E. side of the inner door of the s. porch, at a height of 4 feet 6 inches above the floor. The noonline is 4 inches in length, the stylehole, which is in a joint, is filled, and the aspect is due s. Type 2.
- 166. (2) This dial is on the w. side of the priest's door, which is blocked up. It is 2 feet 6 inches above the ground, the noonline is  $2\frac{1}{2}$  inches in length, the stylehole is small and shallow, and the aspect is due s. Type 3. April 24th, 1914.

## SOUTH BREWHAM CHURCH

167. (1) This dial is on the E. side of the s. porch, at a height of 5 feet 1 inch above the ground. The noonline is 4 inches in length, part of the iron style is in situ level with the face of the stone, but rusted away at the sides, and is about  $\frac{1}{4}$  inch in diameter. The aspect is s. by  $10^{\circ}$  E. Type 5b.

168. (2) This dial is on the E side of the inner door of the s. porch. It is 6 feet 8 inches above the floor, the noonline is 4 inches in length, the stylehole, which is in a joint, is filled, and the aspect is s. by 10° E. Type 2. April 17th, 1914.

### NORTH CADBURY CHURCH

169. (1) This dial is on the first buttress w. of the s. porch. It is 5 feet above the ground, the noonline is 4 inches in length, the stylehole is  $\frac{5}{8}$  of an inch in depth by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by  $15^{\circ}$  E. Type 3.

170. (2) This dial is on the first buttress E. of the s. porch. It is 4 feet 10 inches above the ground, the noonline is 3 inches in length, the stylehole is about  $1\frac{1}{2}$  inches in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $15^{\circ}$  E. Type 3.

171. (3) This dial is on a buttress E. of the priest's door. It is 5 feet 8 inches above the ground, the noonline is  $4\frac{1}{4}$  inches in length, the stylehole is  $\frac{7}{8}$  of an inch in depth and  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by 15° E. Type 9. April 24th, 1914.

### South Cadbury Church

172. This dial is on the s.E. corner of the nave. It is 3 feet 11 inches above the ground, the noonline is 4 inches in length, the stylehole is  $\frac{7}{8}$  of an inch in depth by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by  $30^{\circ}$  E. Type 3.

April 24th, 1914.

The noonline in this dial is considerably out of the perpendicular. This is caused by the stone not facing due s. by as much as  $30^{\circ}$ .

## CHARLTON HORETHORNE CHURCH

173. (1) This dial is on a quoin at the s.w. corner of the s. aisle. It is 8 feet 3 inches above the foundations, the noonline is 4 inches in length, the stylehole is  $1\frac{3}{4}$  inches in depth by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by 10° E. Type 3.

174. (2) This dial is on a quoin on the E. side of the first window E. of the s. porch. It is 8 feet above the foundations, the noonline is 4 inches in length, the stylehole is filled up, and the aspect is s. by 10° E. Type 5b. May 20th, 1915.

### CHARLTON MUSGROVE CHURCH

175. This dial is on the E. side of the inner door of the s. porch. It is 5 feet 6 inches above the floor, the noonline is 2 inches in length, the stylehole, which is in a joint, is filled, and the aspect is due s. Type 2. April 17th, 1914.

### COMPTON PAUNCEFOOT CHURCH

176. (1) This dial is, on the wall w. of the buttress at s.E. corner of the nave. It is 2 feet 8 inches above the ground, the noonline is  $4\frac{1}{2}$  inches in length, the stylehole is open, and the aspect is s. by  $20^{\circ}$  E. Type 3.

177. (2) This dial is on the buttress at the s.E. corner of the nave. It is 4 feet 6 inches above the ground, the noonline is  $4\frac{1}{2}$  inches in length, the stylehole is 1 inch in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $20^{\circ}$  E. Type 7.

April 24th, 1914.

### HOLTON CHURCH

178. (1) This dial is on the w. side of the priest's door. It is 4 feet 10 inches above the ground, the noonline is 3 inches in length, the stylehole is  $2\frac{1}{4}$  inches in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is due s. Type 3.

179. (2) This dial is on the E. side of the priest's door. It is 4 feet 5 inches above the ground, the noonline is  $1\frac{1}{2}$  inches in length, the stylehole is small and shallow, and the aspect is due s. Type 5c.

April 24th, 1914.

## LOVINGTON CHURCH

180. This dial is to the w. side of the window to the E. of the priest's door. It is 4 feet 2 inches above the ground, the noonline is  $3\frac{1}{2}$  inches in length, the stylehole is 1 inch in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $15^{\circ}$  E. Type 5c. May 26th, 1914.

Fragments of an oak style were found in this dial.

## QUEEN CAMEL CHURCH

181. (1) This dial is on the s.E. buttress of the s. aisle. It is 6 feet  $7\frac{1}{2}$  inches above the ground, the noonline is 5

inches in length, the stylehole is invisible, and the aspect is s. by  $10^{\circ}$  E.

182. (2) This dial is on the first buttress to the E. of the priest's door. It is 5 feet 9 inches above the ground, the noonline is  $5\frac{1}{2}$  inches in length, the stylehole is  $1\frac{1}{8}$  inches in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  E. Type 5c.

May 18th, 1915.

No. 1 dial is curious, as it has the lines arranged much as they are in an ordinary sundial, with Roman numerals cut at the ends. There may have been a slit for a gnomon, now carefully cemented up. Probably this should not rank as a Scratch dial.

# WESTON BAMFYLDE CHURCH

183. This dial is on the E. side of the inner door of the s. porch. It is 3 feet 7 inches above the floor, the noonline is 5 inches in length, the stylehole, which is filled up, is in the solid stone and not in a joint. The aspect is s. by  $20^{\circ}$  E. Type 3. April 24th, 1914.

### YEOVIL DISTRICT

This district contains 36 parish churches, and of these, 18 churches have 41 dials between them, 2 of which are doubtful.

The churches with dials are:

Ashington		2	Montacute		1	
Barwick .		2	Mudford		2	
Brympton		2	Odcombe		1	
Camel, West		<b>2</b>	Pendomer		1	
Chilthorne Do	mer	4	Podymore M	Iilton	2	
Chinnock, Eas	t	1*	Rimpton		4	
Limington		<b>2</b>	Stoke-sub-H	famdon	3	1*
Marston Magn	a	1	Sutton Bing	ham	1	
Martock .		5	Tintinhull		4	

The churches at East Coker and Haselbury Plucknett could not be thoroughly examined, as they are overgrown with creepers.

#### ASHINGTON CHURCH

184. (1) This dial is on the second buttress E. of the sporch. It is 6 feet 5 inches above the ground, the noonline is 4 inches in length, the stylehole is nearly 2 inches in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  E. Type 4.

185. (2) On the same buttress, 2 feet  $3\frac{1}{2}$  inches lower down, is a second dial. The noonline is 3 inches in length, and the stylehole is  $\frac{1}{2}$  an inch deep. Type 3. May 19th, 1915.

The lower of these two dials may be only a copy of the one above, but it is badly weathered and it is difficult to judge.

### BARWICK CHURCH

186. (1) This dial is on the w. side of the s. porch. It is 4 feet 9 inches above the ground, the noonline is 3 inches in length, the stylchole is  $\frac{5}{8}$  of an inch deep by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by  $25^{\circ}$  E. Type 3.

187. (2) This dial is on the s.E. corner of the s. aisle. It is 3 feet 6 inches above the ground, the noonline is  $4\frac{1}{2}$  inches in length, and the stylehole is  $1\frac{1}{2}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $30^{\circ}$  E. Type 4.

June 16th, 1915.

Dial No. 1 is just above a consecration cross, of which there are three cut upon the s. wall. Dial No. 2 has Roman figures added at the ends of certain of the lines.

# BRYMPTON CHURCH

188. (1) This dial is on a buttress at the s.w. corner of the s. transept, at a height of 4 feet 11 inches above the ground. The noonline is 3 inches in length, the stylehole is  $2\frac{1}{4}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  E. Type 5c.

189. (2) This dial is on a buttress at the s.E. corner of the s. transept, at a height of 4 feet 1 inch above the ground. The noonline is 5 inches in length, the stylehole is  $1\frac{1}{4}$  inches deep by  $\frac{3}{8}$  of an inch in diameter, and the aspect is s. by  $15^{\circ}$  E. Type 3.

June 8th, 1915.

### West Camel Church

190. (1) This dial is on the w. side of the inner door of the It is 4 feet 10 inches above the floor, the noonline is 4 inches in length, the stylehole is 1½ inches deep by 3/4 of an inch in diameter, and the aspect is s. by 10° E. Type 3.

(2) This dial is on the s.w. corner of the tower. is 5 feet 7 inches above the ground, the noonline is 2½ inches in length, the stylehole is  $1\frac{1}{4}$  inches deep, and the aspect is due s. Type 11, combining 3. May 18th, 1915.

The porch over dial No. 1 is fairly modern. Dial No. 2 is a compact and rather curious little dial. The stylehole has been considerably enlarged.

### CHILTHORNE DOMER CHURCH

192. (1) This dial is on the s.w. angle buttress of the s. porch. It is 4 feet above the ground, the noonline is  $2\frac{1}{9}$ inches in length, the stylehole is shallow, and the aspect is s.w. Type 10, combining No. 12.

193. (2) This dial is on the E, side of the inner door of the s. porch. It is 4 feet 7 inches above the floor, the noonline is  $3\frac{1}{2}$  inches in length, the stylehole, which was in a joint, is filled, and the aspect is s. by 25° E. Type 2.

194. (3) This dial is 1 foot above the last mentioned. The noonline is 3½ inches in length, the stylehole, which was in a

joint, is filled, and the aspect is s. by 25° E. Type 2.

195. (4) This dial is on a buttress to the E. of the s. porch. It is 5 feet 2 inches above the ground, the noonline is 4 inches in length, the stylehole is  $1\frac{1}{2}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by 20° E. Type 7.

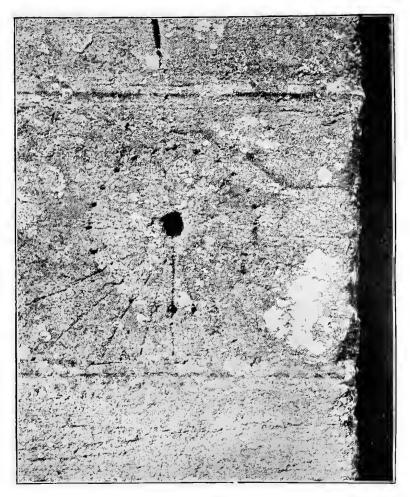
June 8th, 1915.

It is possible that one of the dials by the inner door is a "copy" dial.

# East Chinnock Church

196. This dial is on the w. side of the s. porch, at a height of 4 feet 8 inches above the ground. The noonline is  $2\frac{1}{4}$  inches in length, the stylehole is \frac{7}{8} of an inch by \frac{1}{2} an inch in diameter, and the aspect is s. by 30° E. Type 10. June 15th, 1915.

This is a poor dial on a very soft stone, and it is so indistinct as to be somewhat doubtful.



Podymore Milton Church, Somerset
Type 11

### LIMINGTON CHURCH

197. (1) This dial is on the E. side of the inner door of the s. porch. It is 4 feet 11 inches above the floor, the noonline is 5 inches in length, the stylehole, which is in a joint, is filled, and the aspect is s. by 20° E. Type 2.

198. (2) This dial is on a buttress to the w. of the priest's door. It is 5 feet 1 inch above the ground, the noonline is  $2\frac{1}{4}$  inches in length, the stylehole is  $1\frac{1}{4}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by 15° E. Type 5c.

May 19th, 1915.

The lines in No. 1 are sharp and clean cut.

### MARSTON MAGNA CHURCH

199. This dial is on the first buttress to the w. of the priest's door. It is 7 feet 4 inches above the ground, the noonline is  $4\frac{1}{2}$  inches in length, the stylehole is  $\frac{1}{2}$  an inch deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $10^{\circ}$  E. Type 3. May 18th, 1915.

## MARTOCK CHURCH

200. (1) This dial is on the w. side of the s. porch. It is 6 feet 1 inch above the ground. The noonline is  $3\frac{3}{4}$  inches in length, the stylehole is 1 inch deep, and is in a joint. The aspect is s. by  $5^{\circ}$  E. (See No. 12.)

201. (2) This dial is under the first window E. of the s. porch. It is 4 feet 7 inches above the ground, the noonline is 3 inches in length, the stylehole is  $1\frac{3}{4}$  inches deep, and the aspect is s. by  $15^{\circ}$  E. Type 6.

202. (3) This dial is on the second buttress E. of the s. porch. It is 5 feet 9 inches above the ground, the noonline is  $3\frac{1}{2}$  inches in length, the stylehole is very shallow, and the aspect is s. by  $15^{\circ}$  E. Type 3.

203. (4) This dial is under the third window E. of the s. porch. It is 3 feet 10 inches above the ground, the noonline is 2 inches in length, the stylehole is 13 inches deep, and the aspect is s. by 15° E. Type 10.

204. (5) This dial is on the fifth buttress E of the s. porch. It is 5 feet 1 inch above the ground, the noonline is  $5\frac{1}{4}$  inches in length, the stylehole is  $1\frac{1}{4}$  inches deep, and the aspect is s. by 15° E. Type 5c. June 15th, 1915.

Dial No. 2 is of the unique shape that exists at Tintinhull (224) and Swainswick (25).

### MONTACUTE CHURCH

205. This dial is on the second buttress from the tower, at a height of 5 feet 7 inches above the ground. The noonline is 5 inches in length, the stylehole is  $1\frac{1}{4}$  inches deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $12^{\circ}$  E. Type 5b.

June 18th, 1914.

This dial is upside down, and hence has been moved from its original place. A fragment of the metal style was extracted about an inch in length, and which had rusted down to about  $\frac{1}{4}$  of an inch in diameter. It appears to be a piece of iron.

### Mudford Church

206. (1) This dial is on the s. face of a buttress at the N.E. corner of the chancel. It is 4 feet 8 inches above the ground, the noonline is 5 inches in length, the stylehole is  $1\frac{1}{8}$  inches deep by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by  $30^{\circ}$  E. Type 3.

207. (2) This dial is on the same buttress as the above, 1 foot 4 inches lower down. The noonline is 3 inches in length, the stylehole is 1 inch deep by  $\frac{1}{2}$  an inch in diameter, and the aspect s. by 30° E. Type 3. May 19th, 1915.

Dial No. 2 appears to be fairly well made, but it might be a copy of No. 1.

## ODCOMBE CHURCH

208. This dial is on the s.E. angle buttress of the s. porch. It is 4 feet 4 inches above the ground, the noonline is 3 inches in length, the stylehole is  $4\frac{1}{4}$  inches deep by 1 inch in diameter, and the aspect is s.E. Type 3. June 8th, 1915.

This dial is on the s.E. face of the buttress, and hence may not be in its original position.

#### PENDOMER CHURCH

209. This dial is on the E. side of a blocked-up doorway on the s. side. It is 3 feet 11 inches above the ground, the noonline is  $3\frac{1}{4}$  inches in length, the stylehole is  $\frac{5}{8}$  of an inch deep by  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by  $12^{\circ}$  w. Type 11, combining 10.

June 16th, 1915.

### PODYMORE MILTON CHURCH

- 210. (1) This dial is on the w. side of the inner door of the s. porch. It is 4 feet 6 inches above the floor, the noonline is 1 inch in length, the stylehole is in a joint and filled, and the aspect is s. by 20° E. Type 2.
- 211. (2) This dial is on a quoin at the s.e. corner of the nave. It is 4 feet 9 inches above the ground, the noonline is  $4\frac{1}{2}$  inches in length, the stylehole is  $\frac{3}{4}$  of an inch deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by 15° E. Type 11.

October 1st, 1914.

Dial No. 1 is somewhat unusual in design, and is probably in its original state. Dial No. 2 is elaborate and has lines and dots, and is also of unusual pattern.

## RIMPTON CHURCH

- 212. (1) This dial is at the w. end of the church on s. quoin of window under the tower. It is 4 feet  $6\frac{1}{2}$  inches above the ground, the noonline is about 2 inches in length, the stylehole, which is very shallow, is  $\frac{3}{4}$  of an inch in diameter, and the aspect is due w. Type 3.
- 213. (2) This dial is on the E. side of the first window from the w. end. It is 3 feet  $8\frac{1}{4}$  inches above the ground, the noonline is  $6\frac{1}{2}$  inches in length, the stylehole is 1 inch deep by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $15^{\circ}$  E. Type 8.
- 214. (3) This dial is on the w. side of the window to w. of priest's door. It is 5 feet above the ground, the noonline is  $5\frac{1}{4}$  inches in length, the stylehole is  $\frac{5}{8}$  of an inch in depth by  $\frac{3}{8}$  of an inch in diameter, and the aspect is s. by  $15^{\circ}$  E. Type 3.

215. (4) This dial is w. of the priest's door. It is 4 feet 9 inches above the ground, the noonline is 4 inches in length, the stylehole is filled up, and the aspect is s. by 15° E. Type 5b.

May 18th, 1915.

Dial No. 1 has been moved from its original place and used as a quoin for the w. window. The mortar round the stone is of different date from that of the adjoining stones.

### STOKE-SUB-HAMDON CHURCH

216. (1) This dial is on the s.w. corner of the nave on a quoin. It is 4 feet 3 inches above the ground, the noonline is about 4 inches in length or a little less, the stylehole is  $1\frac{3}{4}$  inches in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by 30° E. Type 3.

217. (2) This dial is on the s.w. corner of the s. transept. It is 5 feet 1 inch above the ground, the noonhole is 2 inches distant, the stylehole is 1 inch in depth by \(\frac{1}{4}\) of an inch in

diameter, and the aspect is s. by 20° E. Type 9.

218. (3) This doubtful dial is on the E. side of the closed doorway in the nave. It is 5 feet 2 inches above the ground, the noonline is  $3\frac{1}{2}$  inches in length, the stylehole, if it exists at all, is filled.

219. (4) This dial is on the E. side of the priest's door. It is 4 feet 6 inches above the ground, the noonline is 5 inches in length, the stylehole is  $1\frac{1}{2}$  inches in depth by  $\frac{3}{4}$  of an inch in diameter, and the aspect is s. by  $25^{\circ}$  E. Type 3.

June 18th, 1914.

No. 3 has radiating lines, as far as can be seen, but it is somewhat doubtful if it be a dial at all.

# SUTTON BINGHAM CHURCH

220. This dial is on the s.w. corner of the nave. It is about 6 feet above the ground, the noonline is 9 inches in length, the stylehole, which is in a joint, is filled and does not show, and the aspect is s. by 10° E. Type 3. June 16th, 1915.

This dial, which is faint, contains few lines and is probably in its primitive condition. The wall is Norman work and does not appear to have been restored.

#### TINTINHULL CHURCH

- 221. (1) This dial is on the E. side of the s. porch. It is 4 feet 2 inches above the ground, the noonline is 3 inches in length, the stylehole is very shallow and  $\frac{1}{2}$  an inch in diameter, and the aspect is s. by 35° E. Type 10.
- 222. (2) This dial is on the third buttress from the E. end. It is 4 feet 6 inches above the ground, the noonline is perhaps 2 inches in length, the stylehole is 1 inch in depth, and the aspect is s. by 35° E. Type 3.
- 223. (3) This dial is on the second buttress from the E. end. It is 4 feet 2 inches above the ground, the noonline is  $2\frac{1}{2}$  inches in length, the stylehole is  $2\frac{1}{4}$  inches in depth by 1 inch in diameter, and the aspect is s. by  $30^{\circ}$  E. Type 10.
- 224. (4) This dial is on the s.E. buttress of the chancel. It is 4 feet 6 inches above the ground, the noonline is  $1\frac{3}{4}$  inches in length, the stylehole is 2 inches in depth by 1 inch in diameter, and the aspect is s. by  $30^{\circ}$  E. Type 6.

June 15th, 1915.

From dial No. 3 the end of the wooden style peg was extracted.

Dial No. 4 is of the curious shape found at Swainswick (25) and Martock (201).

# DIALS IN ABNORMAL POSITIONS

Upside-down.

Dunkerton.

Charlinch.

Claverton (since reversed).

Moutacute.

Upton Noble.

Sideways.

Hinton St. George. Walton-in-Gordano.

Not facing South.

Claverton E. (since removed).

Lamvat W.

Puxton N.

Rimpton W.

Wanstrow E.

Whitchurch W.

Inside South porch.

Aller.

Blackford.

S. Brewham.

Charlton Musgrove.

Chilthorne Domer.

Goathurst.

Kingsdon.

Limington.

Podymore Milton.

Wayford.

Weston Bamfylde.

West Camel.

Inside the church.
Stoke St. Gregory.

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